

REAL ESTATE ASSESSMENT & DEVELOPMENT PLAN

THE PROPERTY BOUNDED

BY

8<sup>TH</sup>, 9<sup>TH</sup>, GRACE AND BROAD STREETS

IN THE

CITY OF RICHMOND, VIRGINIA

FOR THE

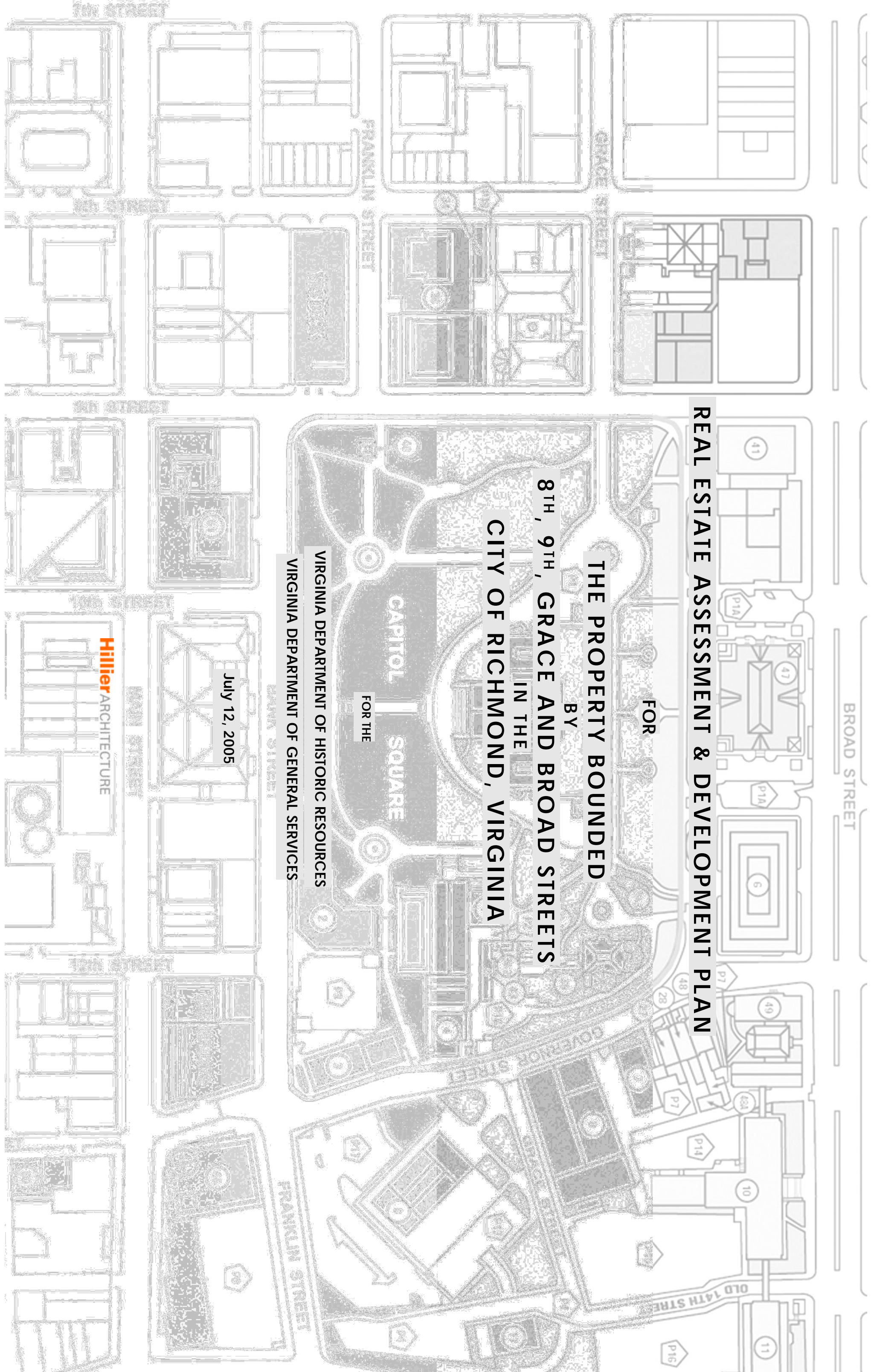
CAPITOL SQUARE

VIRGINIA DEPARTMENT OF HISTORIC RESOURCES

VIRGINIA DEPARTMENT OF GENERAL SERVICES

July 12, 2005

Hillier ARCHITECTURE



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## EXECUTIVE SUMMARY

In the Spring of 2005, the Departments of General Services and Historic Resources joined forces to undertake a Real Estate Assessment and Development Plan that would focus on identifying options and determining the best and highest use for the 8<sup>th</sup> and 9<sup>th</sup> Street Real Estate Assets of the Commonwealth of Virginia.

These assets include the 8<sup>th</sup> Street Office Building [originally known as the Murphy Hotel], the 9<sup>th</sup> Street Office Building [originally known as the Hotel Richmond] and the vacant lot on the corner of Broad and 9<sup>th</sup> Streets.

The three properties are located at a pivotal intersection in Richmond's urban landscape, defining the edge of the historic Capitol Complex, fronting the major artery of Broad Street and being adjacent to a series of major new projects and developments that will dramatically transform this section of the city, including the Library of Virginia, the new Federal Courthouse, the Virginia Performing Arts Center and several other initiatives that are under way or "on the drawing boards".

After a period of inaction, the Commonwealth has undertaken an impressive program to restore, renovate and adaptively reuse some of the underutilized assets on its campus, including the Old State Library, the Capitol, the Finance Building and the Washington Building. The next important step in a very complex sequence of projects is that of capitalizing on the assets on 8<sup>th</sup> and 9<sup>th</sup> Streets, addressing the serious needs of buildings that have obsolete systems, creating needed program space and providing critical swing space to address the renovation needs of the General Assembly Building.

The goals of this Plan, as defined in the Request for Proposals, are to:

- Evaluate the historic and architectural significance of the 8<sup>th</sup> and 9<sup>th</sup> Street Office Buildings
- Assess their existing conditions
- Review their reuse potential
- Evaluate the program needs of the Commonwealth
- Address security concerns due to the relationship of these assets to the Capitol Square
- Provide appropriate connections to the General Assembly Building, the Capitol and the rest of the campus
- Address planning, urban design and architecture concerns of the site
- Provide options for the best and highest use of the site
- Consider alternative disposition of the existing buildings
- Evaluate the highest and most favorable economic benefits to the Commonwealth, considering economic, space planning and parking factors
- Provide a framework for making a decision

An important dimension of the site that merits careful review, consideration and analysis is the historic and architectural significance of the site and the existing buildings.

The Capitol complex has a 225 year history starting with Jefferson's masterpiece, the Capitol, and continuing with a series of

highly distinguished buildings that are great examples of important periods in American architecture, including the Governor’s Mansion, the Bell Tower, the Old City Hall, the Old State Library [now the Patrick Henry Executive Office Building], the Finance Building, etc. In the immediate vicinity of the 8<sup>th</sup> / 9<sup>th</sup> street site, two important historic churches, St. Peter’s and St. Paul’s, the Supreme Court Building and the Federal Court frame the Capitol Square with fine examples of historic architecture spanning over two centuries of architectural history, both local and national.

The site also has a rich history, ranging from important aspects of Richmond’s cultural history to the architectural significance of the two structures. The two structures are very good examples of a rapidly vanishing building type – the early twentieth century high-rise hotel – that was found throughout all major cities of the United States.

Both the 8<sup>th</sup> Street Office Building [Murphy Hotel - 1913] and the renovation and expansion of the 9<sup>th</sup> Street Office Building [Hotel Richmond – 1904 & 1913] were designed by John Kevan Peebles – the principal architect of the Capitol expansion of 1906 – and have important dimensions culturally, architecturally, politically and historically. Both structures meet the criteria of the Virginia Landmarks Register and the National Register of Historic Places for individual listing. While deferred maintenance has taken its toll, both of the structures today maintain their exterior architectural integrity.

Providing the needed information to the Commonwealth to achieve the delicate balance between preservation and new development, a dilemma that all communities face today, is one of the key goals of this Plan.

The first task of this Plan was to assess the program and development assumptions made to date for the 8<sup>th</sup> / 9<sup>th</sup> Street site and whether they would best serve the growing needs of the Commonwealth. The 2005 Virginia State Capitol Master Plan [CMP] identified the need for up to 1,450,000 square feet of new space by 2013, and a present shortfall of 500 parking spaces and a future need for approximately 2,000 additional spaces. The CMP provides a framework of where and how these needs would be accommodated within the Capitol Complex. Regarding the 8<sup>th</sup> and 9<sup>th</sup> Street site, the CMP called for a new structure of 460,000 square feet [sf], which would replace the existing buildings, and parking for 500 cars.

During our discovery process, it became evident that:

- The projected program and parking needs of the Capitol Complex can be accommodated in two general locations. One is the 8<sup>th</sup> / 9<sup>th</sup> Street site and the other is the East Campus Development Area [in the vicinity of the Zinke Building].
- The distribution of the program needs between the two locations was not “set in stone” and could be accomplished in a variety of ways.
- The baseline/minimum critical program needs for the 8<sup>th</sup> / 9<sup>th</sup> Street location were significantly less than originally thought; namely, approximately 200,000 net assignable square feet [nasf] and 150 vehicles.
- This baseline/minimum was based on actual need to provide suitable - and in close proximity - renovation swing space and parking for the occupants of the General Assembly Building, which is projected to be the next major renovation project of the Capitol complex.

The next task of the Plan was to assess the existing conditions and the continuing use/re-use potential of the two buildings.



While several assessments had been made of the two buildings in the past , our independent review produced the following findings:

- Both buildings have problems that are typical of structures of this type, age and construction. These are not unknown or insurmountable problems. Furthermore, for these problems, there are tested procedures for accurately determining their extent and complexity and there are tested repair methods with known cost[s].
- The structural capacity of both structures is within the range of the contemporary structural performance for both office use, as well as other uses, such as residential and / or hotel uses.
- The structural systems of both buildings have significant shortcomings both in plan, i.e. layout and elevation, and floor-to-floor heights, when compared to contemporary structures.
- The existing egress layouts and capacities of both buildings do not meet contemporary code requirements, requiring supplemental egress stairs and related enhancements.
- The configurations of the floor-plates of both buildings are not ideal for the creation of efficient layouts for office, hotel and/or residential uses; however, there are certain changes of limited nature that can be made to enhance their efficiency and utilization.
- Both buildings require completely new building systems. This is a critical issue, as all of the existing systems of both buildings have far exceeded their useful lives and may experience significant failures. Time is of the essence.

This Plan includes Order of Magnitude costs for a series of use options, as part of the overall goal of providing options to the Commonwealth for a sound decision making process.

In addition to the above discussion, several important tasks of the Plan focused on analyzing the site and describing its significance, identifying the important urban design issues, assessing traffic and access issues, providing an overview of security concerns and discussing constructability issues and design treatment. More specifically:

I.   **Constructibility Issues**

As stated earlier, there are two significant historic churches, one next to the 8<sup>th</sup> Street Office Building [St. Peter's, 1834] and the other across the street from the 9<sup>th</sup> Street Office Building [St. Paul's, 1845]. Both are important historic structures with significant stained glass windows and important interior finishes that are sensitive to vibrations quite often associated with major construction. Any impacts of new construction involving piles, deep foundations, overhead cranes, etc. will have to be understood, managed and included in the project costs. For example, it is believed that St. Peter's was built on wood piles. If the 8<sup>th</sup> Street Office Building were to be demolished, deep excavation would have impacts on the foundation system of the church and the wood piles. Underpinning and extensive earth stabilization would be needed, both of which would have to be carefully planned, sequenced and implemented, including appropriate earth retention measures such as sheeting and shoring, as well as real-time vibration monitoring, to ensure that there would be no impacts due to the new construction. Similar issues will have to be addressed for St. Paul's. Finally, a site management and construction plan would be needed to ensure that activities, such as "swinging" cranes above the churches, would be avoided to eliminate any associated risks. The associated costs of these items need to be included in any relevant option and have been included in our estimates.

## II. Parking and Vehicular Access

All four streets defining the edges of the 8<sup>th</sup> / 9<sup>th</sup> Street site are major thoroughfares of the City of Richmond. The size of any proposed parking facility on that location may have implications on the traffic patterns of the city. In addition, any curb cuts for parking and loading dock facilities will have to be carefully planned to ensure that they meet appropriate planning and design standards and do not create impacts on traffic, especially during peak hours. In addition, the actual location of such elements will have to be carefully planned and designed to avoid impacts on the streetscape and the overall quality of the pedestrian experience, as well as the aesthetic of the campus, especially facing the Capitol Square and Broad Street. Our analysis indicates that curb cuts should be avoided along Broad and 9<sup>th</sup> Streets. On 8<sup>th</sup> Street, curb cuts associated with parking ramps – especially below grade - would be both undesirable being next to the church – and very costly – being close to the historic church structure and impacting its foundation and possible wood piles. The most sensible location for entering the parking facility of the project would be on Grace Street, especially if there is a collaboration between St. Peter's and the Commonwealth to share parking access and parking amenities.

## III. Security

Following the Oklahoma City events, it has become very clear that the best way to protect a building is to remove any on-street parking next to the building and control the direction and speed of the vehicular traffic. These goals can be achieved largely through administrative measures with zero cost. Additional protective measures may be considered, such as barriers to prevent vehicles from being driven into a building, enhanced windows and/or structural modifications to control the impact of an explosion and/or delay or prevent collapse in the event of an attack, allowing the occupants to safely evacuate the facility. All such measures require that there is a clear position on security matters regarding the Capitol Complex; there is a plan and procedures to follow and there is a regular review process in place to ensure that security measures are updated regularly as new knowledge becomes available. At a minimum, the best protection for the Commonwealth's important facilities is to eliminate on-street parking and/or stopping: an important measure that would provide a first and very important line of defense. Along the same lines, large uncontrolled below grade parking, under important Commonwealth facilities, is of equal concern. If on-site parking is provided in the form of a garage below a critical facility, this could also be a risk that needs to be carefully monitored and managed. The larger and less controlled the parking garage is, the higher the possibility of an event occurring would be.

## IV. Street Presence and Streetscape

Broad Street is being revitalized through a series of projects and initiatives, developing a new identity of urban living with entertainment and amenities that bring people back to the city. Any of the options that are delineated in this report include recommendations for public amenities, such as retail space, public indoor space[s], gallery[ies], etc. These types of uses:

- Create a pedestrian-friendly streetscape
- Provide amenities that encourage the public to use the city's resources not only during regular work hours, but also during evenings and weekends

- Encourage downtown living, a dimension that makes a great urban setting

Capitol Square is one of the most historic and significant urban parks in America. A strong street presence on 9<sup>th</sup> and Broad Streets will create new synergies, further enhancing its qualities as a place to visit, have lunch, enjoy the landscape and the historic buildings, in addition to supporting the business of government.

V. Pedestrian Connections to the Capitol Complex

There are at least three potentially key connections to the Capitol Complex from the 8<sup>th</sup> and 9<sup>th</sup> Street site:

- At Grace Street, where the actual vehicular gate of the Capitol is located
- At Darden Garden, the east-west spine that connects the GAB, Old City Hall, the renovated Old State Library, the Governor's Mansion, etc.
- Along Broad Street, one of the important public "faces" of the Commonwealth

All three connections are located within a block, crossing 4 lanes of traffic. While there are traffic lights at the intersection of Broad and 9<sup>th</sup>, as well as Grace and 9<sup>th</sup>, a significant amount of potentially dangerous pedestrian crossing occurs at mid-block approximately at Darden Garden, which is a critical link with the renovated Old State Library, the Executive Office Building of the Commonwealth.

The pedestrian connections to the Capitol Complex are important urban design, planning and design dimensions that should be addressed in any option that the Commonwealth chooses to pursue. The 8<sup>th</sup> / 9<sup>th</sup> street site could become an important anchor to a reinvigorated Darden Garden, providing important connections among some of the most important buildings of the Commonwealth's campus, all of which are also historically and architecturally significant structures.

VI. Use Options

In addition to the continued use as offices for the Commonwealth, it is possible to use the existing buildings for other functions, i.e. commercial office space, apartments or condominiums, hotels, and retail. Each of these options is feasible. The relative location of the site in relationship to the Capitol Square and the rest of the Capitol complex is such that it makes it extremely important for the strategic long term needs of the Commonwealth. While such options may be theoretically possible, they need to be carefully evaluated against all other parameters, achieving the right balance.

VII. Architectural Expression and Design

The Capitol Complex is a rare architectural continuum of expression from Jefferson's classicism to John Kevan Peebles' early twentieth century designs to the Art Deco Old State Library. The presence of such a fine architectural continuum raises the issue of what the architectural expression should be of any new construction on the 8<sup>th</sup> / 9<sup>th</sup> Street site. Should it be a carefully crafted classically inspired building or a modern expression of our time? Either choice would have supporters and opponents. There are, however, three key dimensions that are common to both:

- Any new construction should be able to pass the test of time, as all other buildings on Capitol Square have been able to do.
- The massing, fenestration and key lines of a base, shaft and cornice common to the buildings of the Square should be taken into consideration in any new design.
- Compatible materials should be considered that will visually tie any new construction to the Capitol Square's architectural continuum of over 200 years.

The corner of Broad and 9<sup>th</sup> Streets is the gateway to the Capitol Complex and it should be celebrated as such. The relationship of the building[s] to the street should be pedestrian friendly, promoting interaction with the street, avoiding garage entries, loading docks, parking, etc. Finally, the architectural community should be involved through design charrettes to provide feedback and comments on the design of the selected option.

The treatment of the 8<sup>th</sup> / 9<sup>th</sup> Street site will be one more chapter of this two century architectural history and the expectation should be that this latest effort should have the ability to pass the test of time, both as an architectural edifice and in terms of building performance, with a long term life and the ability to be reused by future generations, as has been the case with all other key buildings of the Capitol Complex. Design excellence for both reuse and new construction should one of the key issues associated with the overall treatment of the site.

**VIII. Construction Cost**

The Plan found that there is a premium of approximately \$25 per gross square foot in the reuse of the existing buildings, a figure that is extrapolated to approximately 10 to 15 %.

If disposition or participation of the private sector is sought through the PPEA vehicle, the possibility of using federal and state rehabilitation investment tax credits can be explored, which can provide financial and tax benefits that can make the reuse of the buildings a more attractive financial proposition.

On the other end of the spectrum, if new construction is pursued, the costs associated with the protection of the adjacent historic structures need to be carefully evaluated to ensure that a reliable cost line item is included in the overall budget, based on analysis of the proposed design, assessment of the below-grade conditions, etc. These costs have been included in the Plan's estimates.

As stated in the earlier sections of this Executive Summary, project cost is one of several factors that the Commonwealth needs to evaluate before selecting a specific course of action. The Plan indicates clearly that there are several options, all with strong and weak points. The selected course of action should achieve the delicate balance among all of these competing factors, one that takes the long term view of the Commonwealth's interests and its obligations as a steward of the Capitol Square Complex.

**IX. Options for Structuring the Development**

There are several alternatives for structuring the selected option, from the conventional approach of the



Commonwealth financing the project without any participation of the private sector, to creative financial structures, such as the public-private partnerships outlined in the Public-Private Education Facilities and Infrastructure Act.

The presence of historic structures eligible for listing on the Virginia Landmarks Register and the National Register of Historic Places provides alternatives for private sector participation, use of long term and / or ground lease vehicles and Rehabilitation Investment Tax Credits, both at the federal and state level. Such an approach can provide attractive tax and equity incentives that make the reuse of the existing buildings financially more attractive.

If the private sector participates in the project, it is important that several dimensions of the project be established upfront, as part of the overall goals of the project:

- The participation of the private sector may require complicated administrative, legal and accounting vehicles that need to be evaluated carefully by both the Commonwealth and the private entity that may participate in such venture to ensure compliance with the Commonwealth's laws and regulations, as well as the U.S. Tax Code.
- Such an undertaking will be a new addition to the architectural continuum that started with Jefferson's work and is continued today, with the view to continue into the future for centuries to come. The quality of design needs to be of the same caliber of the buildings that surround the Capitol.
- The projected life of such a development should exceed the limited cycle of any private sector participation, even if it is as long as thirty or more years. The dimension of time far exceeds the limited horizons of private investments as can be attested by the life of buildings such as the Capitol, the Old State Library, the Finance Building, etc.

It is imperative, therefore, that any undertaking that may involve the private sector is seen as a new addition to the Capitol Complex, with a very long life. All financial planning, design, construction, building performance and long-term aging issues should be viewed and addressed in this context.

Summary of Recommendations

The Plan has delineated a wide range of issues and presented several options for development. It also presented a framework for selecting an option, a framework that is based on a balanced use of a wide range of criteria. Using this framework and the proposed criteria, it became clear that there is no single option/alternative that is clearly the most preferred scenario. All options have attractive advantages and disadvantages.

There are, however, some important observations that can be made and recommendations for future action:

- The existing buildings are significant, meeting the standards for being listed on both the Virginia Landmarks Register and the National Register of Historic Places. As such, they merit serious consideration for preservation and reuse.
- They do require immediate attention, both externally and internally. Given their condition, there is no such a thing as a "do-nothing" scenario. There is a pressing need for the Commonwealth to move forward with a responsible course of action that addresses these issues. Time is of the essence and action is needed to avoid potentially serious building

and / or system failures.

- This does not mean that the building[s] should not be reused in their entirety and/or partially. Our analysis indicates that there are several treatment options with known costs and performance expectations.
- The programmatic needs of the Commonwealth can be met through all of the options, including those that involve the reuse of the existing building[s].
- The 8<sup>th</sup> / 9<sup>th</sup> Street sites are critical for the present and future needs of the Commonwealth, as well as the definition of the Capitol Square as part of the overall Capitol Complex. Control of the sites by the Commonwealth in perpetuity is an important issue. The 8<sup>th</sup> Street site, while it may appear to be less critical, it be viewed both as a site for future expansion for the Commonwealth and an opportunity for the private sector to create a new development that could inject new life to this rapidly changing part of Richmond, with the Commonwealth maintaining control of the site.
- Regardless of what the selected scheme may be, its ability to pass the test of time as a long term investment of the Commonwealth, as a building of timeless quality and as a vital part of the Capitol Complex are critical dimensions that need to be addressed with great sensibility and sensitivity.
- Finally it is important to emphasize that time is of the essence. The Commonwealth needs to make decisions relatively quickly. While all of the options have merits, one needs to be selected. The selected course of action should be one that would take all of the issues under consideration and will achieve the delicate balance that a site of this significance deserves and needs.

## 1. ACKNOWLEDGEMENTS

This Assessment and Development Plan has been prepared under the auspices of the Virginia Department of Historic Resources, Kathleen Kilpatrick, Director, and the Department of General Services, Jim Roberts, Director. The project team appreciates the effort and support of Ms. Kilpatrick, Mr. Roberts and their staffs.

The project team consists of:

- Hillier Architecture – architecture and project management
- BCWH Architects - programming
- Robert Silman Associates – structural engineering
- Joseph R. Loring Associates – mechanical, electrical and life safety engineering
- Wilbur Smith Engineers – traffic and parking analysis
- ERA – economic modeling and analysis
- Schirmer Engineering – code and life safety analysis
- The Christman Company – cost estimating and constructability analysis
- Sadler & Whitehead Architects – archival research

The participation and input of representatives of the following groups is much appreciated:

- Jennie Dotts and Ron Mitchell - Alliance to Conserve Old Richmond Neighborhoods
- Lori Garrett - American Institute of Architects
- Elizabeth Kostelny, Alexander Macaulay, Gerald Milisky and Garland Pollard - Association for the Preservation of Virginia Antiquities
- David Bradley - Capitol Square Preservation Council
- Brooke Hardin and John Woodward - City of Richmond
- Tony Maggio and Robert Vaughn - Commonwealth of Virginia House Appropriations Committee
- Bill Echelberger and Betsey Daley - Commonwealth of Virginia Senate Finance Committee
- Jim Dunn - Greater Richmond Chamber of Commerce
- Sarah Cooleen and Jim Whiting - Historic Richmond Foundation
- Rob Nieweg - National Trust for Historic Preservation
- Jack Berry - Richmond Renaissance
- Bill Denms - Virginia Biotechnology Research Park
- Brian Ohlinger - Virginia Commonwealth University
- Carolyn Moss - Virginia Public Buildings Board

## 2. INTRODUCTION

### GOALS OF THE PROJECT

In the Spring of 2005, the Departments of General Services and Historic Resources joined forces to undertake a study that would focus on identifying options and determining the best and highest use for the 8<sup>th</sup> and 9<sup>th</sup> Street Real Estate Assets of the Commonwealth of Virginia.

These assets include the 8<sup>th</sup> Street Office Building [originally known as the Murphy Hotel], the 9<sup>th</sup> Street Office Building [originally known as the Hotel Richmond] and the vacant lot on the corner of Broad and 9<sup>th</sup> Streets.

The three properties are located at a pivotal intersection of Richmond's urban landscape, defining the edge of the historic Capitol Complex, fronting the major artery of Broad Street and being adjacent to a series of projects and developments that will change the face of the city, including the Library of Virginia, the Federal Courthouse, the new Virginia Performing Arts Center and several other initiatives that are under way or "on the drawing boards".

After a period of inaction, the Commonwealth has undertaken an impressive program to restore, renovate and adaptively reuse some of the underutilized assets on its campus, including the Old State Library, the Capitol, the Finance Building and the Washington Building. The next important step, in a very complex sequence of projects, is the reuse of the real estate assets on 8<sup>th</sup> and 9<sup>th</sup> Streets, addressing serious needs of buildings that have obsolete systems, creating needed program space and providing critical swing space for the General Assembly, as well as addressing the renovation needs of the General Assembly Building.

The goals of this Plan, as defined in the RFP, were to:

- Assess the existing conditions of the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings
- Describe the historic and architectural significance of the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings
- Evaluate the program needs of the Commonwealth
- Review the reuse potential of the buildings
- Address security concerns due to the relationship of these assets to the Capitol Square
- Provide appropriate connections to the General Assembly Building, the Capitol and the rest of the campus
- Provide options for the best and highest use of the site
- Consider alternative disposition of the existing buildings
- Address planning, urban design and architecture concerns of the site
- Evaluate the highest and most favorable economic benefits to the Commonwealth, considering economic, space planning and parking factors
- Provide a framework for making a decision



Photo 2.1: 8<sup>th</sup> Street Office Building



Photo 2.2: 9<sup>th</sup> Street Office Building



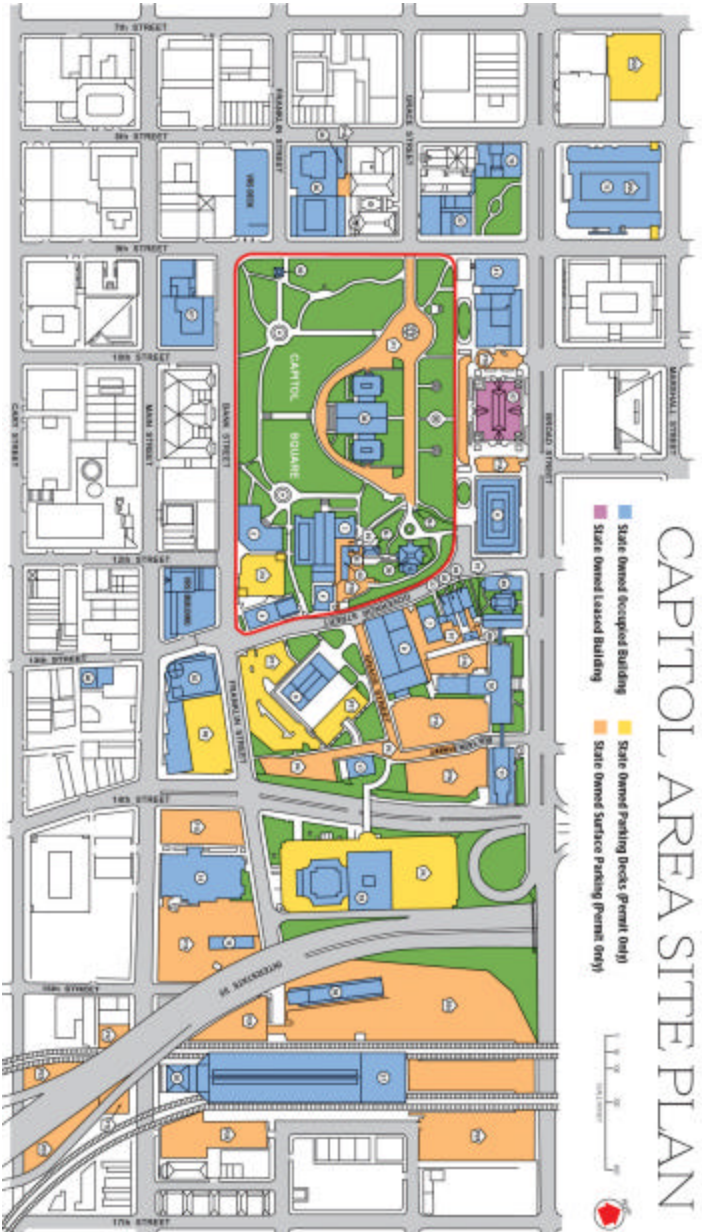
PROJECT METHODOLOGY

The project began with a kick-off meeting with the selection committee to review the project goals and process. Archival drawings, reports and studies in the Department of General Services [DGS] files were reviewed, copied distributed to the project team. The team undertook a two-day condition assessment survey of the interior and exterior of the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings in coordination with DGS.

Meetings were held with two interest groups: civic groups and preservation organizations. The goal of these meetings was to understand the concerns of the various organizations with respect to the project, to discuss options for development and gain insights into different viewpoints of the project. The team also met with the Trammell Crow development team to review a previous project proposal for the site and the methodology behind their decision-making. As background research on alternatives for site redevelopment, the team contacted selected local architects, developers, and others familiar with local construction/rehabilitation costs, market trends, pending projects and past experience with renovation and development of housing, office and hotel properties in Richmond.

Four options were developed for the site to test various combinations of interventions. The economic, design, preservation and programming characteristics of each option were evaluated. The four options were presented to the selection committee, civic and preservation groups for their feedback.

A final report, outlining findings and reviewing options and their implications was prepared.



### 3. THE NEEDS OF THE COMMONWEALTH

This Assessment and Development Plan is the result of several needs of the Commonwealth: increased requirements for state office space, the need for swing space to facilitate the renovation of the General Assembly Building, the need for additional parking [particularly for members of the General Assembly], and the condition of both the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings.

#### THE VIRGINIA STATE CAPITOL MASTER PLAN

The Virginia State Capitol Master Plan [CMP] was completed in 2005 and represents an effort by the Commonwealth to develop a long-range program and master plan for the Capitol Square complex. The first phase of the CMP involved the renovation of the Capitol building – an effort that is currently underway. The goals of the second phase of the CMP were to maximize utilization of Commonwealth office space in downtown Richmond and to contribute to the revitalization of downtown, to promote tourism and to preserve historic treasures.

The CMP undertook a detailed survey of existing Commonwealth space in the greater Richmond area and made projections for long term growth. After surveying the condition of existing Commonwealth buildings in the downtown area, recommendations were made to accommodate existing and future growth in space requirements and parking. Three master plan options were developed and evaluated, resulting in a recommendation that focused growth on the east side of Capitol Square. The Plan recommended construction of a new building on the current project site.

The CMP recommended that new structures provide mixed-use facilities on the ground floor. It is recommended that new buildings consist of a two story base with an additional 5 stories above, primarily to maintain the existing low scale of the perimeter of the Square, as compared to the high-rise buildings of the Main Street area.

#### SPACE NEEDS OF THE COMMONWEALTH

Based on the recommendations of the CMP and the related space planning study, it was determined that between 1,200,000 and 1,450,000 NASF [Net Assignable Square Feet] of additional space would be needed in the Capitol Square area by 2013, the farthest date projected by the study. The study further defined the need as being from 440,000 to 1,020,000 NASF, depending on how one defined the agencies that need to be at Capitol Square, and how much leased versus state-owned space is used.

The recommended design solution in the CMP provides for a mix of demolition, renovation and new construction. New construction of 1,020,000 NASF is proposed, comprised of 520,000 NASF of new construction on a new “eastern” campus”, with the assumption that the 8<sup>th</sup> and 9<sup>th</sup> Street site was to be re-developed by a PPEA proposal to accommodate 466,000 NASF of new space and the Finance Building addition now under construction [40,000 NASF] is included.

Future space needs planning is very subjective. Variable criteria that may significantly impact actual result are in five

primary areas:

- Likely actual growth of staff: The CMP noted that the impact of reorganization for the new Department of Technology [VITA] was very inconsistent. Growth is shown due to consolidation of technical staffs [400 new staff] while the other agencies affected, which should have shown reduced similar staff, showed no impact. At 250 NASF per 400 new staff, this amounts to 100,000 NASF.
- Amount of space allocated to each staff position: Section 4-5.09 of Appropriation Act states 250 Net Assignable Square Footage [NASF] should be used. A concurrent recommendation by an outside consultant, CBRE, looking at managing state space needs recommended 210 NASF as a more typical standard. The study notes that many departments housed in older buildings currently far exceed either amount. Using the 250 NASF standard, as was done in the planning study, showed that the state needs significant new space. However, using a 210 NASF number showed a minimal increase in new space needs.
- Prioritizing what agency space needs to be part of Capitol Square: The CMP evaluated the priority of each state agency's need for being located within the Capitol Square complex as being either high, medium or low. The recommendation was for all medium and high priority growth needs to be met, requiring between 868,500 NASF and 1,213,965 NASF, depending on if the 210 or 250 NASF standard is used. However, this demand is reduced by any medium priority agency not being accommodated within Capitol Square.
- Where within the Capitol Square area new office space is located: The CMP reviewed three main design solutions, principally renovation, demolition and construction of new facilities, all on the eastern edge of the Capitol complex. All assumed that the 8<sup>th</sup> and 9<sup>th</sup> Street site was to be re-developed by a PPEA proposal to accommodate 466,000 NASF of new space. The three options vary from 500,000 to 740,000 NASF of new space, depending on the density of the design solution. The proposed development options are, therefore, rather flexible. Thus, much of the new office space can be located on the eastern edge of the campus and the study does not imply any critical reasons for a certain amount of new or renovated space needs to be accommodated specifically on the 8<sup>th</sup> and 9<sup>th</sup> Street site.
- Whether any demand is met by the private sector through leased facilities: The CMP further explores a range of options that can include leased versus state-owned space. Depending on the ratio of variables chosen, the demand for total new space can vary by 240,000 NASF.

It is noted in the CMP and elsewhere that the existing General Assembly Building [GAB] is in priority need of major renovation or replacement. It has been suggested that the 8<sup>th</sup> and 9<sup>th</sup> Street site could be swing space for this critical governmental function during the time of construction on the GAB due to its proximate location to the existing building and Capitol. The GAB currently has approximately 400,000 gross square feet, or 239,300 NASF. Some of that space is specialized meeting room space that may need to be accommodated outside of any swing space, so at a minimum, 200,000 NASF of swing space is needed.

Based on an evaluation of the CMP and space planning documents, it is apparent that the actual required new office space is variable, depending on the standards, policies, and final design solutions that are selected. It could be argued, for example, that all new office space need could be met through new construction on the eastern edge of the campus, or

that by changing the variables the anticipated need is can be minimized.

A reasonable conclusion would be that any development of the 8<sup>th</sup> and 9<sup>th</sup> Street site needs to include, at a minimum, 200,000 NASF to both accommodate the General Assembly as swing space and serve to fulfill future office space needs. The quantity of space warranted on this site, however, will need to be determined by many factors, including cost, demonstrated need, preservation goals, urban planning goals, and policy decisions by the Commonwealth.

**PARKING NEEDS**

Employee, as well as public, parking has been an ongoing issue around Capitol Square. The issue is of particular importance given the current restoration of the Capitol Square landscape. In the past, during the General Assembly, members have parked in, on and around Capitol Square and its landscape. With the restoration of the Capitol and landscape, a solution must be found to prevent a recurrence of this ad hoc solution.

The CMP identified a current shortage of approximately 500 parking spaces, based on the Commonwealth's policy of providing parking for 80% of its employees. Proposed solutions included the construction of approximately 2,000 parking spaces on the east side of the campus, as well as 500 on the current project site. In discussions during the preparation of this Plan, parking solutions discussed included: revisiting the Commonwealth's 80% parking requirement in light of current corporate standards and the Commonwealth's own goals for car pooling and mass transit usage, and working with the City of Richmond and the private sector to better utilize existing surface lots and garages, and developing new garages. Based on our evaluation of the issues, it is recommended that the minimum amount of parking to be provided on the 8<sup>th</sup> and 9<sup>th</sup> Street site be adequate to accommodate members of the General Assembly – approximately 150 spaces. Any parking provided beyond this minimum could be utilized to meet the Commonwealth's additional parking needs.

**BUILDING SECURITY**

Building security exists on multiple levels, most significantly, external and internal. External threats can be controlled through limiting proximity to a building and through the building construction and materials themselves. Internal threats can be addressed by limiting and controlling access to a building. Each of these security issues must be carefully considered for this project and for the Capitol Square as a whole.

The Commonwealth currently controls access to its buildings through the use of security guards at all primary entrances. Design to accommodate this requirement must be considered for this project.

It is also noted that the 8<sup>th</sup> Street Building is directly opposite the new federal courthouse. This new structure is, no doubt, protected by a series of design elements required for its level of security. Proximity to this building may result in the 8<sup>th</sup> Street site being considered a “soft target”. This, along with other external threats, should be evaluated as part of the design process.



### CONNECTIONS TO THE CAPITOL COMPLEX

The project site is located immediately adjacent to Capitol Square. The 9<sup>th</sup> Street frontage overlooks the Square and the General Assembly Building [GAB], providing immediate access to the seat of government – both visually and physically. Treatment of the site should build on this close relationship. Most of the other Commonwealth buildings fronting on the Square are separated only by limited access streets or plazas. 9<sup>th</sup> Street is a major traffic artery, creating a greater sense of separation for the project site. Easing and strengthening this connection can be achieved through specific traffic control mechanisms, pedestrian crossings and signage, as well as through the design of the buildings on the site.

As part of a previous potential development scheme, consideration was given to the construction of a pedestrian bridge between the 8<sup>th</sup> and 9<sup>th</sup> Street site and the GAB. Such construction is not advised as, although providing convenient and comfortable connection between the sites, such a bridge would have significant impact of the view corridor down 9<sup>th</sup> Street and the street-level activity of the area. The City of Richmond, in its Downtown Plan, is considering banning the construction of any further pedestrian bridges for these reasons. Additionally, the construction cost of such a structure would be significant.

## 4. ANALYSIS OF THE SITE

### HISTORIC DEVELOPMENT OF CAPITOL SQUARE

Capitol Square and its perimeter developed in four distinct steps. The earliest of the buildings were the Capitol building (1785), the Executive Mansion (1813), and the Bell Tower in 1824. Each was designed in a chaste Neoclassical idiom. They were followed by a group of mid-19<sup>th</sup>-century churches on Grace Street (St. Peter's in 1835 and 1854 and St. Paul's in 1844), the Customs House (1858) on Bank Street, and Morison's Row (1853) on Governor's Street. The churches and the Customs House perpetuated the trend of academically correct classical revival details. The Neoclassical style buildings, including the Murphy and Richmond Hotels, constructed at the turn of the 20<sup>th</sup> century, continued an American fascination with traditional, classically-derived architectural detail established by Jefferson at the State Capitol. Mid-century buildings include the Old State Library.

The current 8<sup>th</sup> and 9<sup>th</sup> Street Office Buildings are connected buildings on a critical site at the entry to Capitol Square. While the 8th Street Office Building, historically Murphy's Hotel, fronted on Broad with a secondary entry from 8<sup>th</sup> Street, the 9<sup>th</sup> Street Office Building faced the drive into Capitol Square, with a secondary entry on Grace Street facing historic St. Paul's Church.

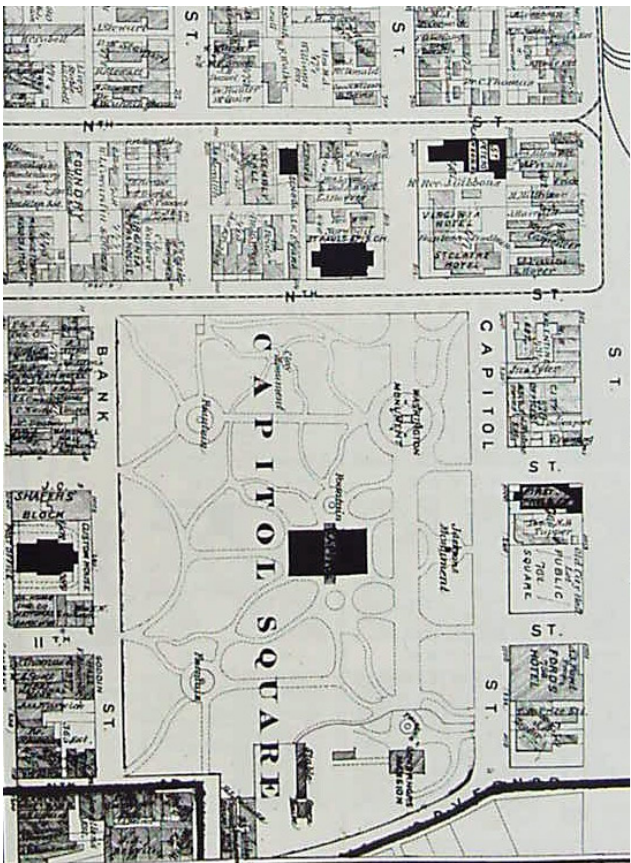
The 9<sup>th</sup> Street Office Building terminates the axis of Darden Garden, formerly Capitol Street. Together the two historic buildings complete an important collection of Neoclassical buildings constructed around the turn of the 20<sup>th</sup> century, beginning with the Finance Building (1893), continuing with the wings of the Capitol (1906), the Life Insurance Company of Virginia (1906, now the General Assembly Building) and concluding with the Supreme Court of Virginia Building (1919, 1922) and the Washington Building (1922). The two hotel buildings were the tallest and most public of the group.

Early-20<sup>th</sup>-century Sanborn Insurance maps document hotels and boarding houses on all sides of Capitol Square. These included the eleven-story Richmond (earlier, the St. Claire) Hotel and Murphy's Hotel at the northwest corner; the four-story Valentine Hotel, Campbell's Hotel, and Ford's (later Powhatan) Hotel on the north side; the four-story Imperial and Spottswood Hotels (formerly St. Luke's Hospital) at the southeast corner, and the three-story Rueger's (now the Commonwealth Park Hotel) and Commercial Hotels at the southwest corner.

At the time of the Richmond and Murphy Hotels' construction, Broad Street was dominated by shops. 9<sup>th</sup> and Grace Streets still had a mix of churches, dwellings, and shops. Old City Hall (1887-93) was a massive monument to city government across from the Capitol's north elevation. Along Governor Street were a collection of hospitals and infirmaries, boarding houses, and dwellings. Offices for the Richmond Times-Dispatch and News Leader were housed on Bank Street, along the south side of Capitol Square. Over the last century, most of the private and commercial properties around the Square were either converted to governmental functions or replaced with new government buildings.

### RELATIONSHIP OF THE SITE TO THE CAPITOL COMPLEX

Capitol Square is, in part, defined by its edges: 9<sup>th</sup> Street, Bank Street, Governor Street and the Commonwealth buildings lining the former Capitol Street. Each presents a different face to the Square. The project site along 9<sup>th</sup> Street forms a portion



Early map of Capitol Square before the Murphy and Richmond Hotels.



View of Capitol Square and the Richmond Hotel.

of the western edge (Figure 4.1). 9<sup>th</sup> Street is a counterpoint to the formality of the north and south edges, and the small scale of Governor Street. The corner of 9<sup>th</sup> Street and East Grace Street is one of the primary access points to Capitol Square – both pedestrian and vehicular. Visually, the 9<sup>th</sup> Street Office Building forms the terminus of the east/west axis on the north side of the Capitol. Both buildings the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings have been occupied by the Commonwealth since 1966, creating a bureaucratic and pedestrian connection to the rest of the Capitol complex.

One of the goals of the Virginia State Capitol Master Plan (CMP) was to create a unified governmental complex. This is being achieved through improvements to the landscape, renovation of the buildings and reinforcement of the “campus” connections between the buildings. Due to their size and proximity, the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings are an integral part of the campus, although they are separated from the Square by 9<sup>th</sup> Street. Through improvements to circulation and pedestrian connections, as well as careful restoration and/or new construction, this relationship between the Square and the site can be reinforced.

**THE CHARACTER OF THE SITE TODAY**

The project site is one of the most significant in Richmond due to it's location along Broad Street, proximity to Capitol Square, and central location with regard to major new projects and existing Commonwealth and civic buildings. The site currently consists of the 8<sup>th</sup> and 9<sup>th</sup> Street Office Buildings and the parking lot at the corner of Broad and 9<sup>th</sup> Streets (Figure 4.2). These sites form an “L” shaped parcel, the remaining quadrant of the block being the historic St. Peter's Church. The site presents a diverse face to the surrounding city: empty and scaffolded former hotel, a parking lot, an historic former hotel used as offices and an historic church.

With the exception of the Richmond City Hall, the scale of the buildings along East Broad Street is low to mid-rise in height (Figure 4.3). City Hall is 22 stories, but other buildings near the project site range from two to ten stories. Immediately adjacent to the project site, buildings range from two to 9 stories. The 8<sup>th</sup> and 9<sup>th</sup> Street Buildings are both 11 stories, although their relatively short floor-to-floor dimensions make them the equivalent of a contemporary 7-9 story office building. Historically, the taller buildings near the Square have been along Broad Street (with the exception of the Monroe Building, which is removed from the immediate area of the Square). The 8<sup>th</sup> Street building was once the tallest building on Broad Street. Buildings located south of Broad Street have traditionally been lower in scale.

One of the goals of the CMP is to maintain a relatively low scale around the Square. Although the Commonwealth is not limited by local zoning regulations, this recommendation, along with the contextual scale of the adjacent buildings should guide the project. However, the function and location of the building demand a significant building that is appropriate to its context. The surrounding context offers an array of significant buildings of diverse architectural styles and functions, as with the buildings surrounding Capitol Square. Nearly every American architectural style is represented.

The 8<sup>th</sup> Street Office Building is currently being vacated by the Commonwealth and will remain vacant until a decision is made as to its future. The building is surrounded by a sidewalk bridge due to the deteriorated condition of the terra cotta cornices. The building presents a strong façade to Broad Street, much in keeping with the original streetscape. The primary entrance, originally on Broad Street, was moved to 8<sup>th</sup> Street during a renovation. The building faces a restored historic

façade across Broad Street that is now the entrance to a large office building. Across 8<sup>th</sup> Street is the new federal court house currently under construction. The highly visible east face of the 8<sup>th</sup> Street Office Building is painted brick and consists of a regular series of windows overlooking the parking lot. Although this was never treated architecturally as a primary façade, it has always been highly visible over the now-removed lower adjacent structures. The south façade is treated in a similar manner, looming over St. Peter's Church.

The 9<sup>th</sup> Street Office Building is currently occupied by Commonwealth offices. The main entrance faces directly across 9<sup>th</sup> Street toward Capitol Square, helping to form the western edge of the Square. The original entrance faced Grace Street and has been replaced by a secondary entrance. The building, like 8<sup>th</sup> Street, has a highly visible plain, painted brick façade facing both St. Peter's Church and the parking lot. These elevations have always been visible over adjacent buildings.

Several of the buildings on the Square share and/or are connected by utilities, varying from steam to communications. Although not currently connected other than communications, during design careful consideration should be given to the viability of connecting the site to these services.

The parking lot replaced a small park which, in turn, replaced several small commercial structures fronting on Broad Street. The lot serves as reserved parking for Commonwealth employees and is currently a "missing tooth" along Broad Street. While the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings anchor the southeast and northwest corners of the block, the parking lot leaves a void along both Broad and 9<sup>th</sup> Streets. There are other such sites along the street which will be filled-in by new projects in the near future. 9<sup>th</sup> Street is one of the primary access points to the Square and, in its current configuration, the parking lot is an unimpressive entry point. Together with the General Assembly Building across the street, the parking lot site could create a significant, almost ceremonial, entrance to the Square.

**CURRENT INITIATIVES AND PROJECTS UNDER PLANNING, DESIGN AND CONSTRUCTION**

The project site is currently surrounded by active and planned construction, restoration and rehabilitation projects being undertaken by the Commonwealth, the federal government, the City of Richmond and private concerns (Figure 4.4).

The restoration of the Virginia State Capitol, adaptive reuse of the Old State Library, and the renovation and expansion of the Finance Building are currently underway. The renovation of the Washington Building is planned in the near future. These projects, along with the CMP, demonstrate a commitment by the Commonwealth towards preservation, adaptive reuse and renovation of the historic buildings surrounding the Square. It is these buildings that give a sense of place to the Square and make it one of the most significant capital complexes and urban environments in the country.

The U.S. Department of General Services is currently constructing a new federal courthouse on Broad Street between 7<sup>th</sup> and 8<sup>th</sup> Streets, immediately to the west of the 8<sup>th</sup> Street Office Building. This new building and plaza, designed by noted architect Robert A.M. Stern, will have a significant impact on the Broad Street corridor and the project site. The building is designed under the GSA's Design Excellence program and brings a significant new structure to downtown Richmond that is in keeping with the character and quality of many of the existing adjacent buildings.

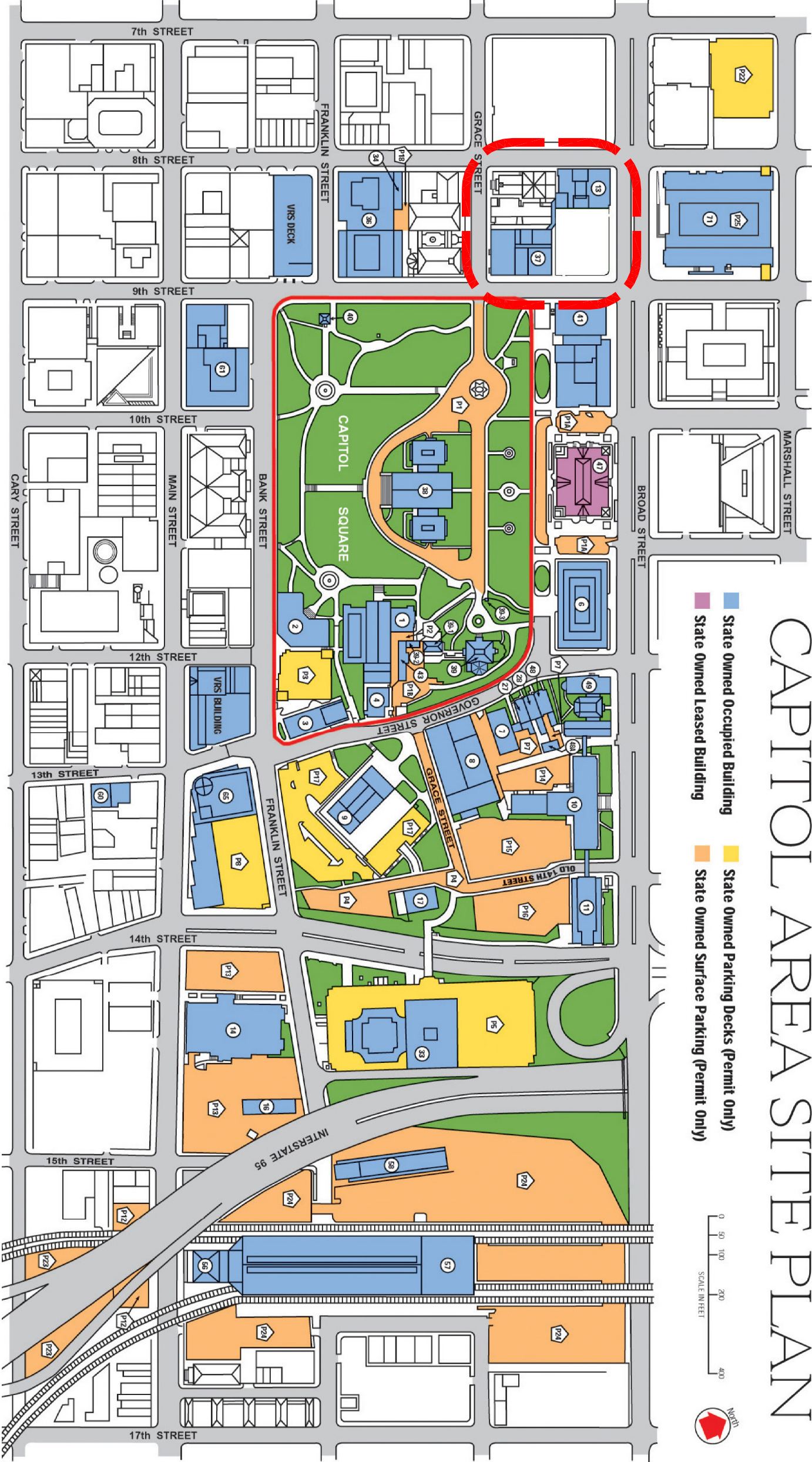


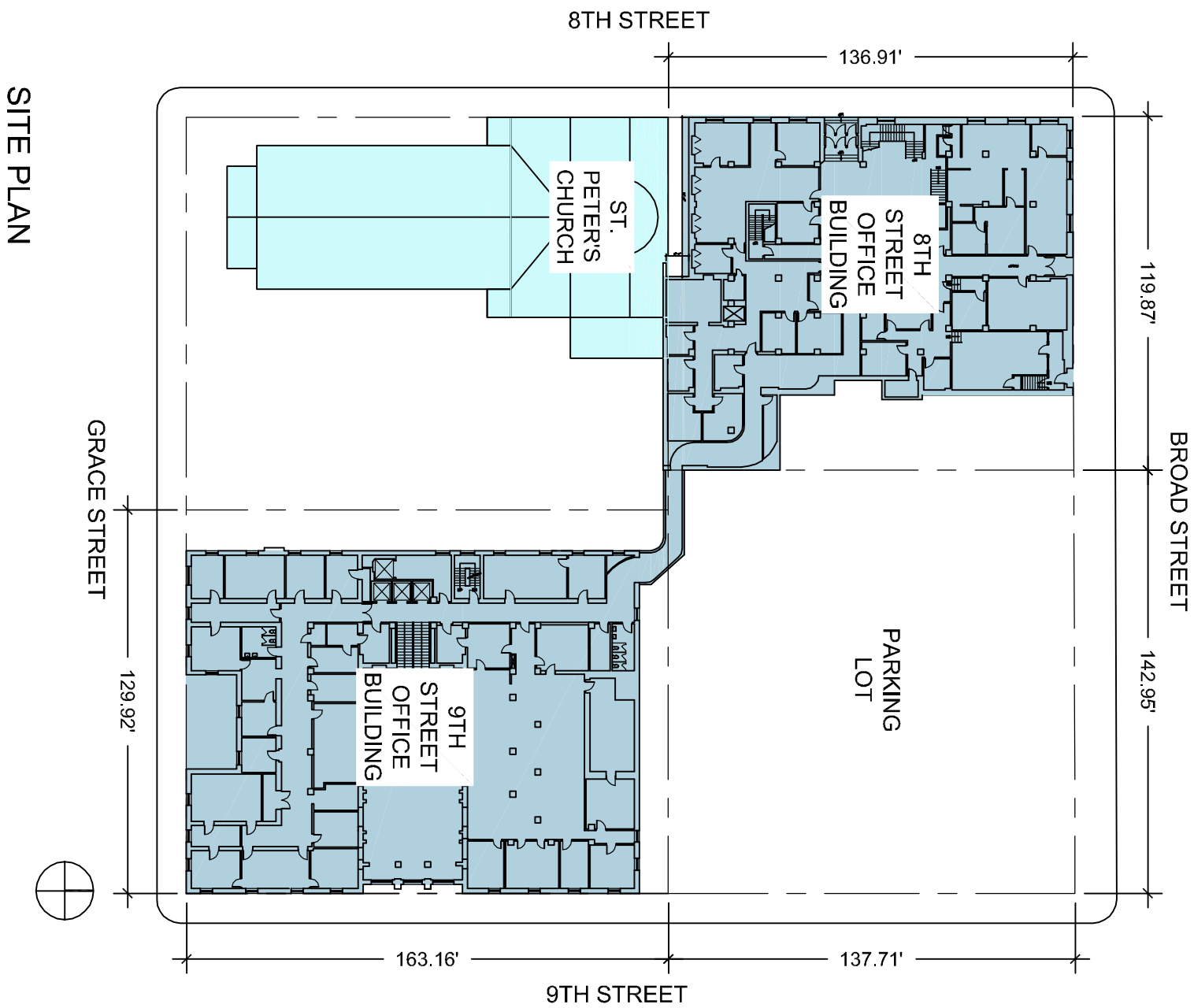
The City of Richmond is currently undertaking the renovation of the New City Hall. This significant structure, the tallest in the immediate neighborhood, is being re clad, which will bring a new contemporary architectural expression to the area, contrasting with the more traditional architectural styles around it.

The Virginia Performing Arts Center is currently under construction on Broad Street between 6<sup>th</sup> and 7<sup>th</sup> Streets. This new complex combines new construction with the renovation and adaptive reuse of existing structures to create several new theaters, performance and support spaces. The Center will bring significant new activity to the area.

Additionally, new projects by VCU, Phillip Morris and others are under construction or planned for the near future in the immediate vicinity of the project site.

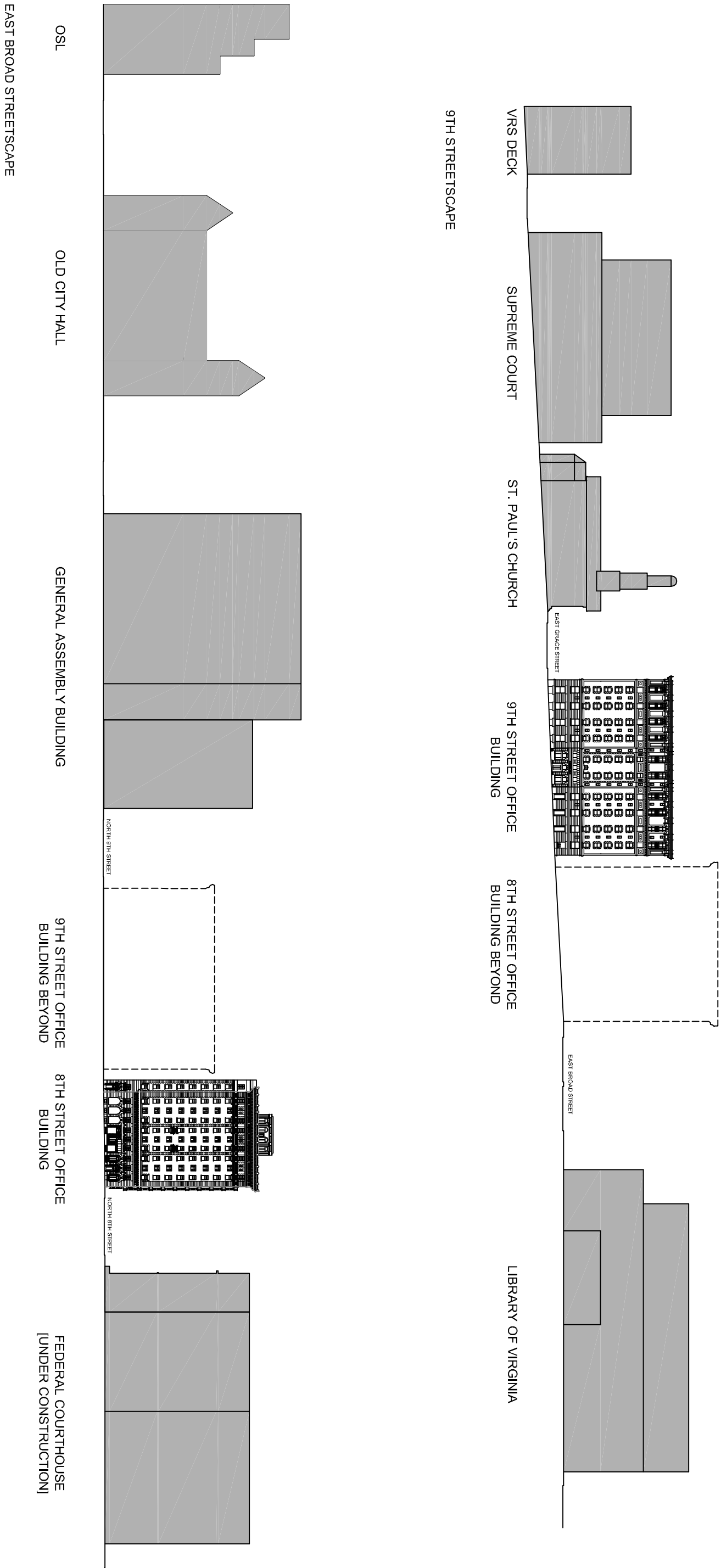
The City of Richmond created a Downtown Plan in 1997 as a guide for development and improvements to the downtown area. The Plan evaluates downtown's assets and limitations, articulates a vision of downtown in 2010 and identifies strategies for change. The Plan addresses the 8th and 9th Street site by recommending improvements to Broad Street and the streetscape; integration of residential, retail and other mixed uses; the conversion of Grace Street to two-way traffic; and other transportation improvements. The Plan envisions the project site as having a "government" use.

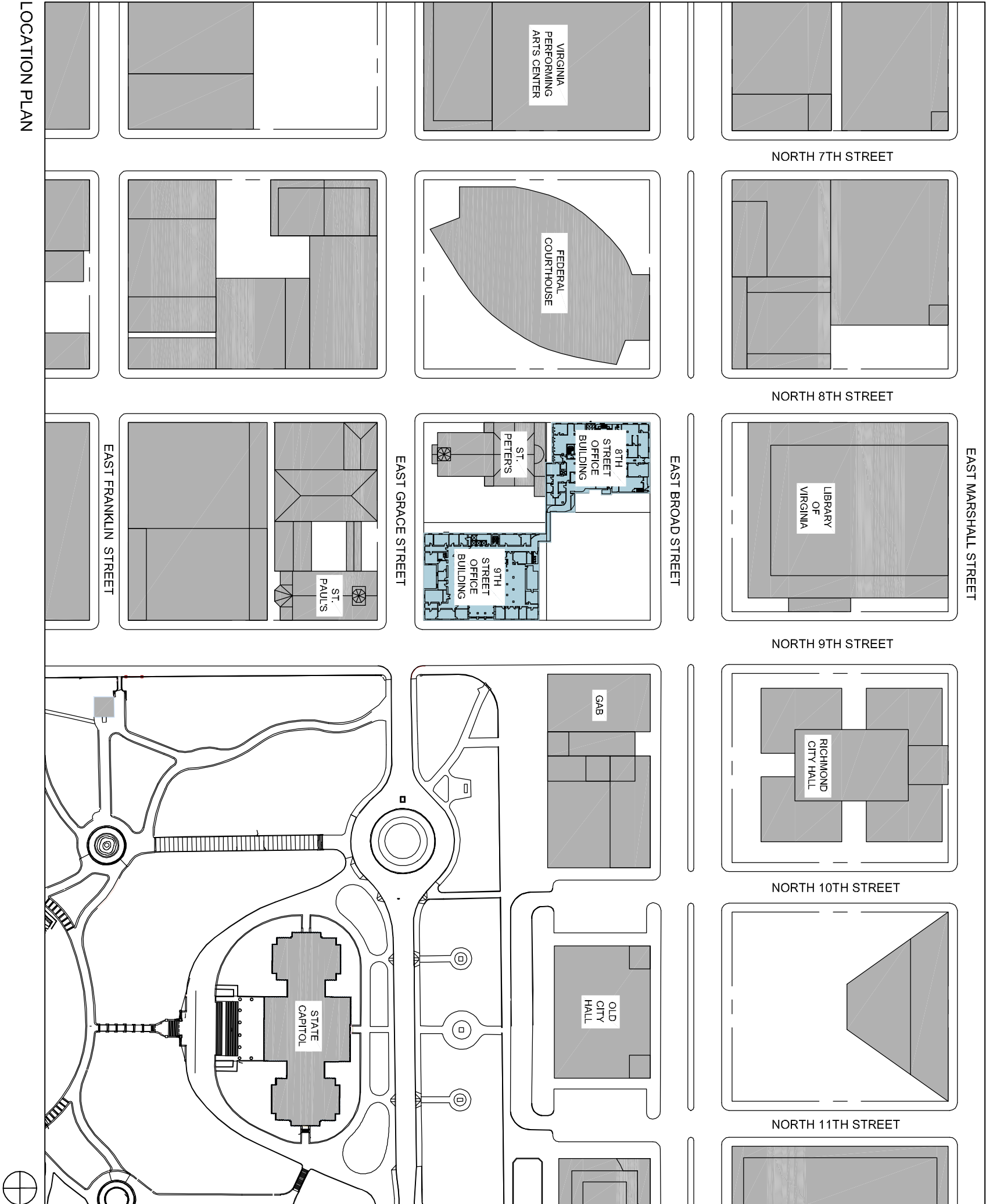




SITE PLAN

NOTE: SITE DIMENSIONS TAKEN FROM SURVEY.  
BUILDING DIMENSIONS NOT BEEN FIELD VERIFIED.





## TRAFFIC AND PARKING

Due to the impact of traffic and parking on the development of the site, a detailed review of related issues has been undertaken. The Capitol Square area is currently being developed along the recommendations of the CMP which documents existing and future employment, office and parking needs. The CMP has been used as a tool to focus on parking and assessment of current policy and needs.

Capitol Square is bounded by Broad Street to the north, Bank Street to the south, Governor Street to the east, and 9<sup>th</sup> Street to the west. The streets in the Capitol Square area serve both State and Federal office buildings as well as the General Assembly building. The State Capitol grounds attract citizens doing business in the area, as well as numerous tourists. Within this relatively small area approximately 60 state agencies conduct business; some of which requires interagency involvement. Some of these interagency trips are made on foot, generating additional pedestrian traffic, while other trips are made by vehicles, which result in additional access and parking impacts.

The CMP details design concepts and their correlation to parking. This document references a parking shortfall of approximately 500 parking spaces based on the Virginia Department of General Services (DGS) parking policy of providing a parking space for 80% of all state employees. The CMP recognizes that this goal is unrealistic when compared to private sector models, and is difficult to satisfy. The CMP offers alternative goals based on proposed design options and work schedules to mitigate traffic impact during peak hours. We would recommend DGS reconsider the parking space goal and work with available state, city and privately owned garages and lots to provide as many spaces as available. In addition, environmentally and socially conscious alternatives, already a Commonwealth goal, such as car pooling and mass transit should be further developed. Figures 4.5 & 8 illustrate existing buildings and available parking along 8<sup>th</sup> and 9<sup>th</sup> Streets.

### Existing Traffic Patterns and Conditions

Presently, Broad Street is the only roadway bounding the study area that provides two-directional travel; the remaining streets are all one-way. Broad Street serves vehicles traveling both eastbound and westbound, while Grace Street only serves vehicles traveling westbound. 8<sup>th</sup> Street provides for the southern direction of travel while 9<sup>th</sup> Street provides for the northern direction of travel.

Northbound 9<sup>th</sup> Street typically experiences morning, midday, and afternoon peak hour delays that quickly subside by the end of the hour. Southbound 8<sup>th</sup> Street typically experiences increases during the morning, midday, and afternoon peak hour; however traffic remains steady, as 8<sup>th</sup> Street is a direct link from Broad Street to Cary Street and beyond. The Greater Richmond Transit Company (GRTC) also has a bus transfer station located at the intersection of 8<sup>th</sup> and Grace Streets which results in additional congestion and delays.

The existing morning and afternoon peak hour traffic volumes on Broad, Grace, 8<sup>th</sup> and 9<sup>th</sup> Streets are illustrated in Figure 4.6. Analyses of existing conditions indicate that most intersections operate at acceptable levels of service as indicated in Figure 4.6.



### Multimodal Transportation Studies

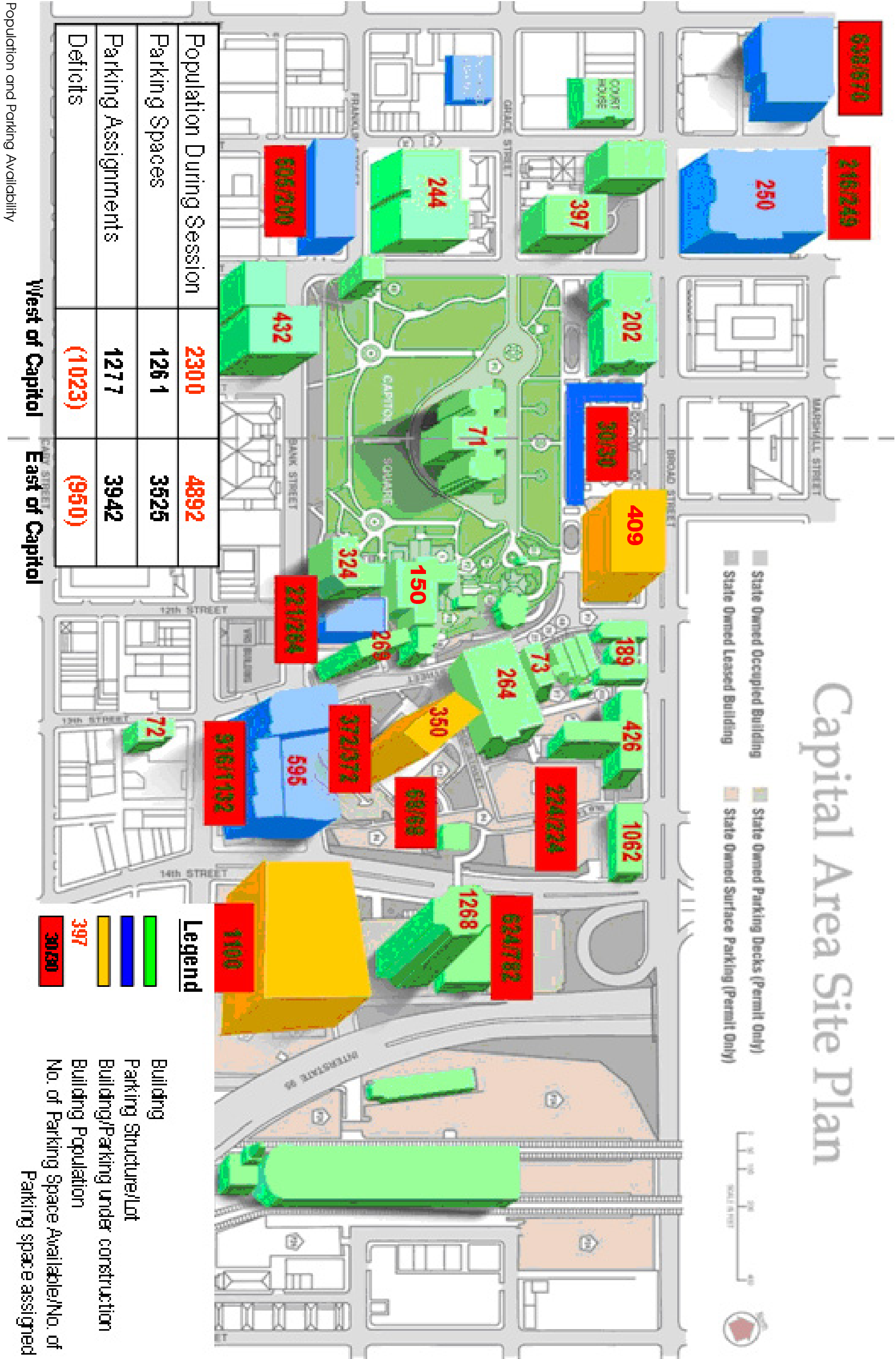
The City of Richmond has completed two phases of the Fixed Wheel Trolley Study which has identified several east/west and north/south routes providing intercity connectivity. Several of the routes identified in the study show 9<sup>th</sup> Street as a north/south route. At this time the City is reviewing the second phase results. However, it does not anticipate that funding will be available in the near future.

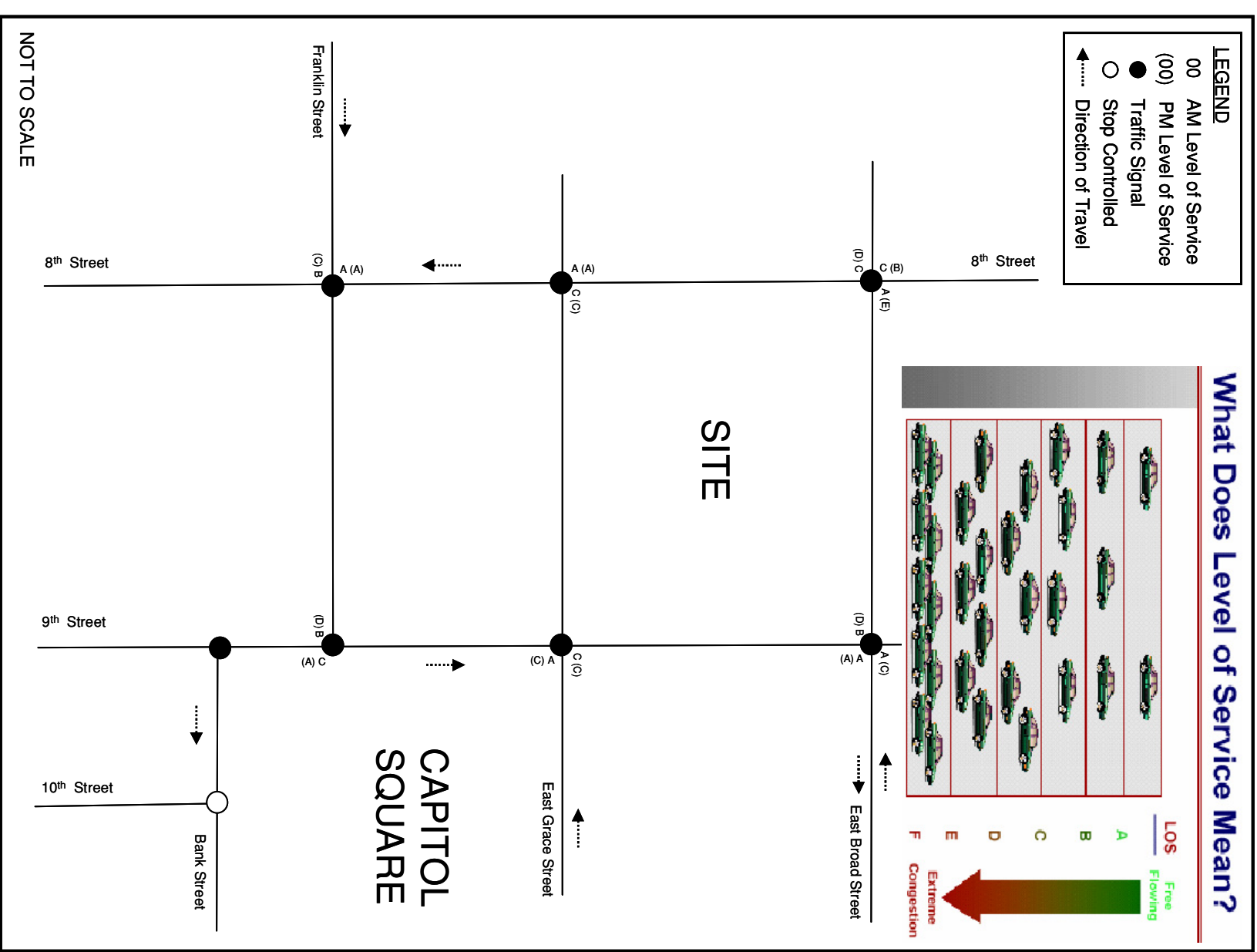
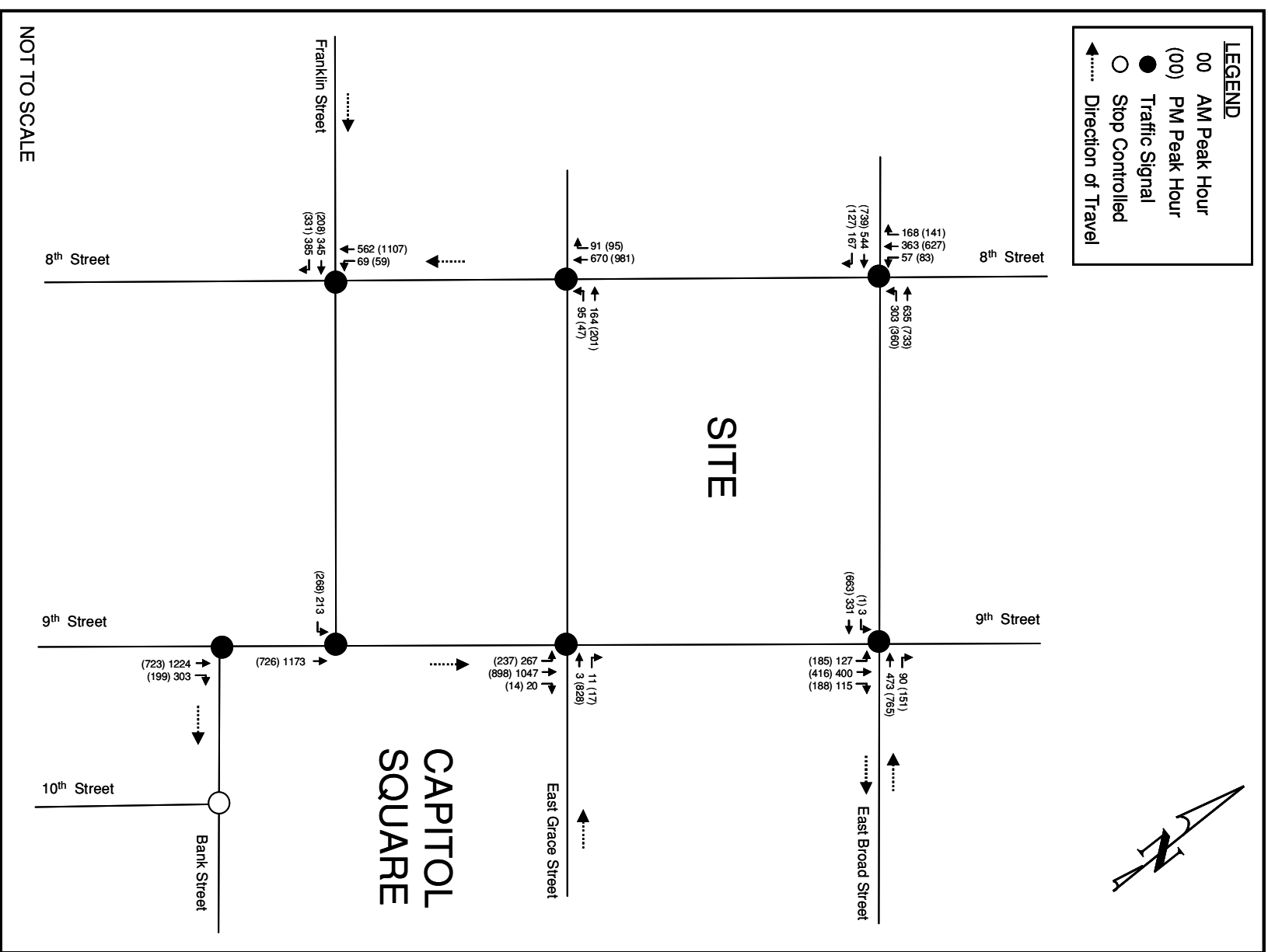
#### Parking Analysis

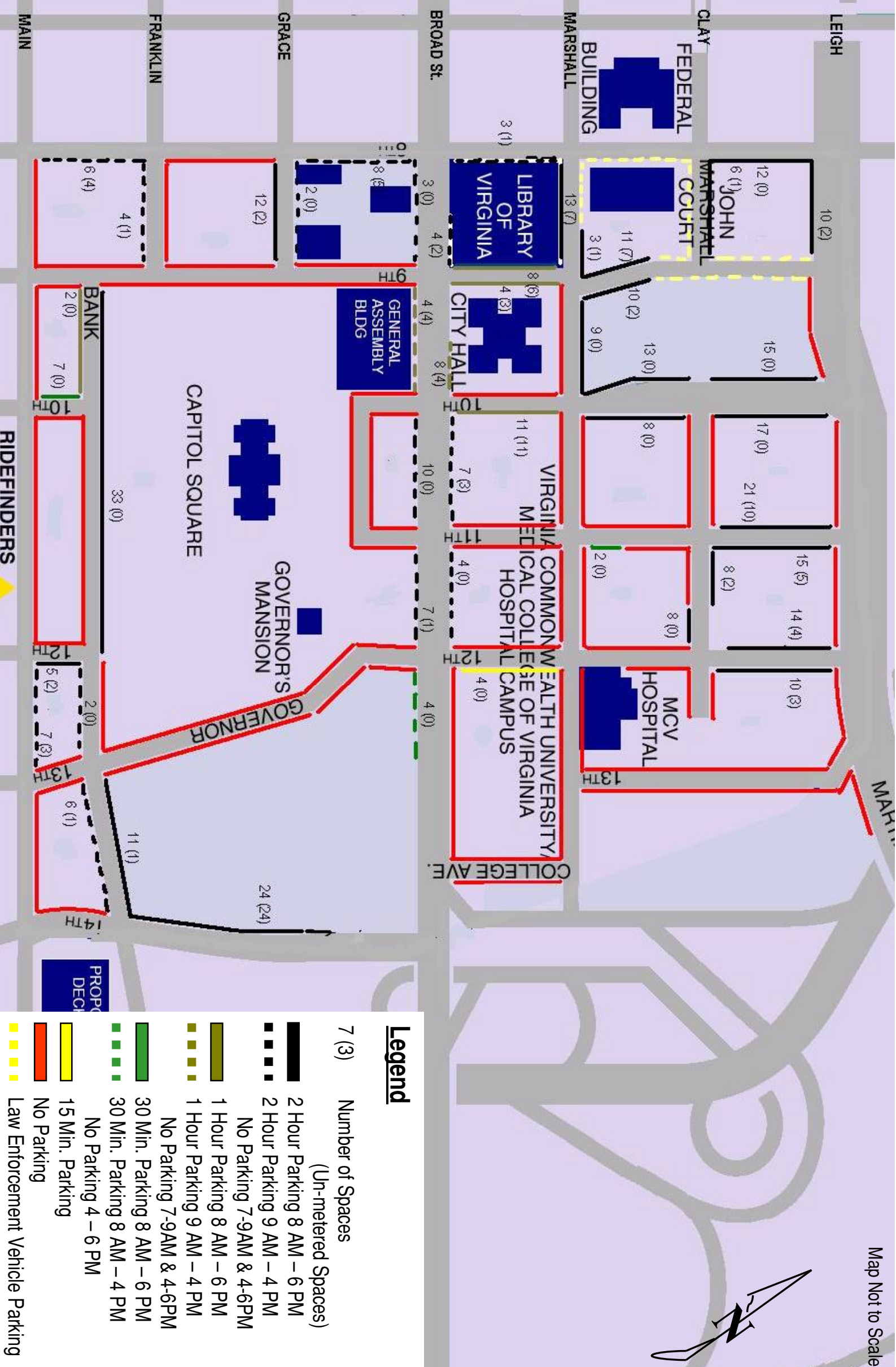
A review of the existing on-street parking inventory indicates that on-street parking is at a premium and typically is available on a first come first served basis. The on-street parking primarily serves short-term visitors and should not be considered as available parking for the General Assembly or occupants of any proposed use at 8<sup>th</sup> and 9<sup>th</sup> Street sites. Figure 4.7 illustrates the existing on-street parking inventory.

A review of the existing off-street parking inventory indicates two adjacent garages and several parking lot facilities within tolerable walking distances of project site. In addition to the existing facilities, there are plans for a large garage to be built on Grace Street at 7<sup>th</sup> Street by the City. This garage is slated for use by the planned Richmond Performing Arts Center and City of Richmond. Additionally, DGS is completing a 1,500 space garage on 14<sup>th</sup> Street at Main and Franklin Streets. Figure 4.8 illustrates the existing public off-street parking inventory.

Underlying the required parking needs for any development on 8<sup>th</sup> or 9<sup>th</sup> Street are the parking needs for the General Assembly members and senior staff. The General Assembly parking needs typically last no more than three months out of the year and require flexibility from the facility staff. Providing a 150 space garage on site would provide General Assembly members with parking across from Capitol Square. It would be possible to relocate parking occupants of the development site during the General Assembly session and offer valet parking or shuttle service. As illustrated in Figure 4.9, the relocation of these daily users could be absorbed by surrounding facilities which would increase the utilization of these outlying parking facilities. While most of the existing outlying parking facilities are at capacity, several offer reserve capacity that could be used by these relocated daily users. Additionally, DGS could review the use of existing and proposed facilities and determine which could be used temporarily for General Assembly members and a shuttle provided for transportation to Capitol Square. Ideal facilities to review would be the new deck currently under construction on 14<sup>th</sup> Street between Main and Bank Streets, the existing facility on 14<sup>th</sup> Street at Monroe Tower, or the much rumored new deck on Broad Street at 10<sup>th</sup> Street.

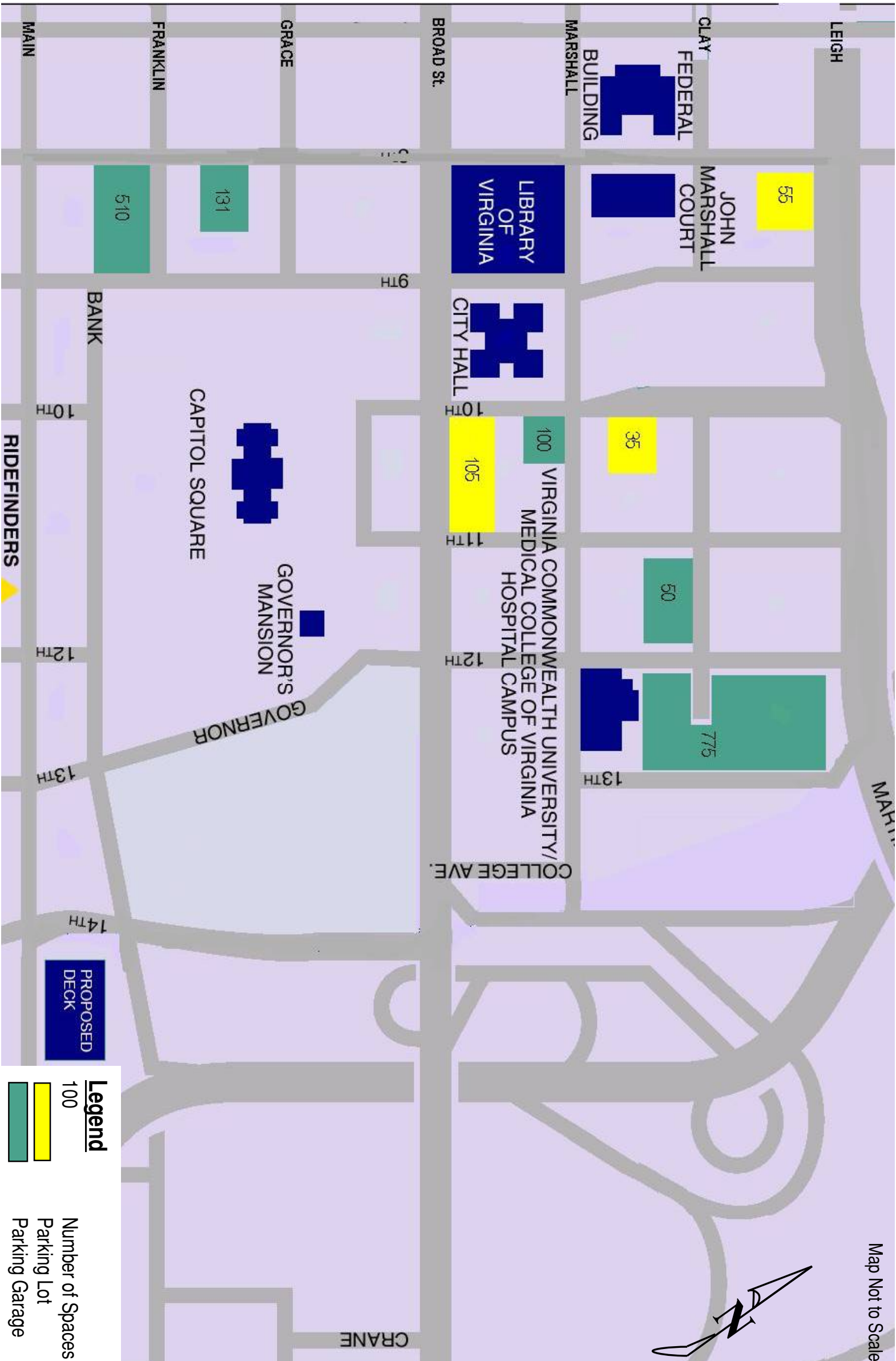




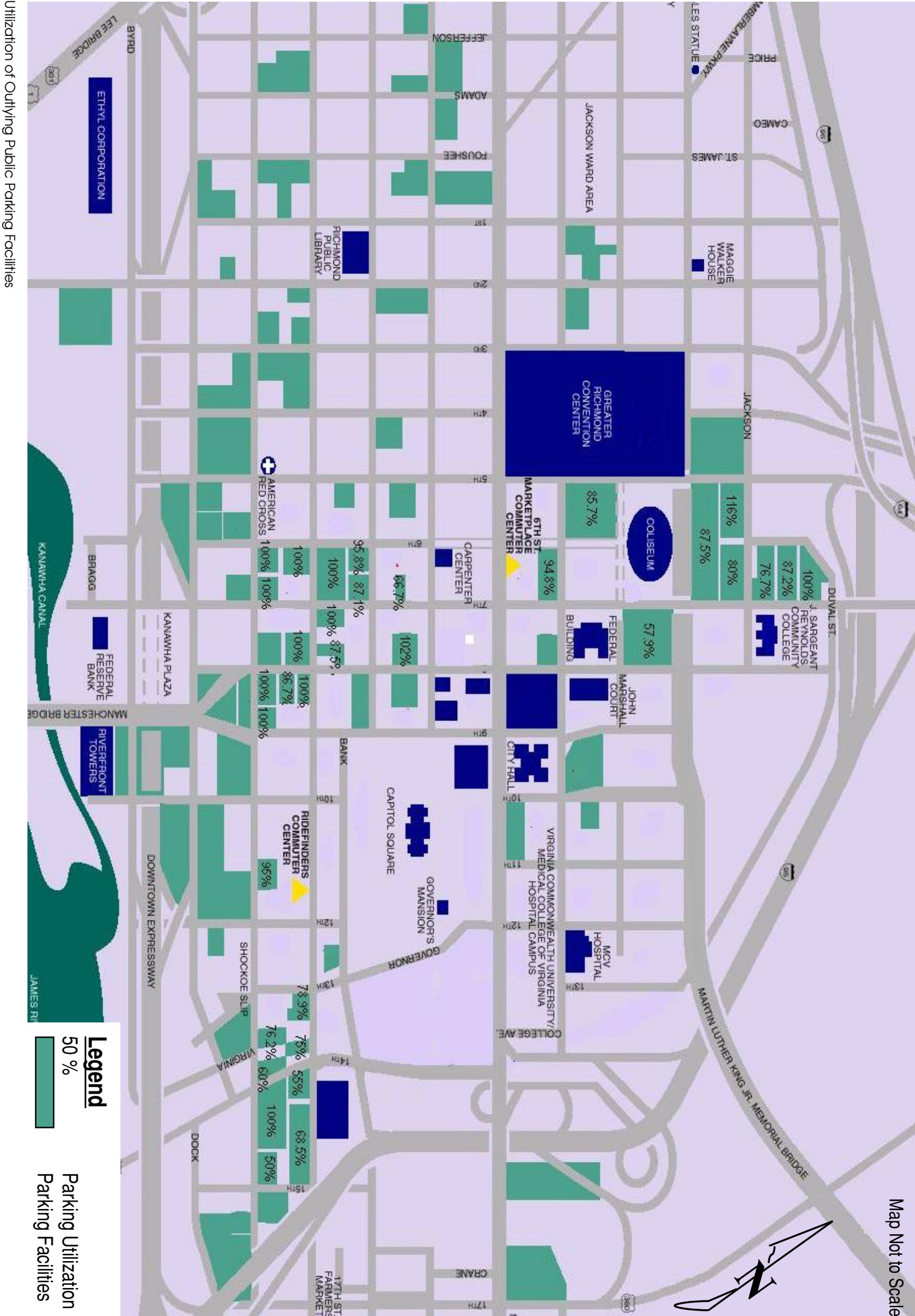


On-Street Parking Inventory





Off-Street Public Parking Inventory





## 5. THE TWO HISTORIC STRUCTURES: THE RICHMOND AND MURPHY HOTELS

### INTRODUCTION

The Richmond and Murphy hotel buildings, now known as the 9th and 8th Street Office Buildings, individually and together, are significant works of architecture that represent important aspects of Richmond's social and political history. They are prominent elements in the Capitol Square district that includes other pivotal landmarks like the State Capitol, Executive Mansion, Old City Hall, and St. Paul's and St. Peter's Churches. Prominently sited at the northwest corner of Capitol Square at the west end of the Darden Garden [formerly Capitol Street], these two hotel buildings provided temporary housing for General Assembly delegates, as well as campaign headquarters, meeting rooms, banquet halls, billiard parlors, barbershops, and bars where political causes, public policies, bills and candidates were vetted, debated, and marked for success or failure for more than a half century. From the time of their construction in 1904-1913 the two hotels' facilities functioned as de facto offices and public hearing rooms for the State Senate and House of Representatives before the Commonwealth purchased the nearby Life Insurance Company of Virginia building and converted it to a "General Assembly Building." [Photos 5.1, 5.2 and 5.4].

Photo 5.1: The Murphy Hotel Building in 1919. Note bridge to annex.



Photo 5.2: The Richmond Hotel as designed in 1904.

As noted in the Richmond Times-Dispatch article announcing the hotels' closure: "Among politicking Virginians of three generations, each [hotel] won widespread affection as a citadel of hospitality and convenience. Both provided refuge, recreation and political campaign command posts for governors, senators, and state legislators – plus an infinite variety of other candidates and camp followers – during the glory days of the long dominant, conservative, old Democratic organization bossed first by U.S. Sen. Thomas Staples Martin [1895-1920] and then Governor-Senator Harry Flood Byrd [1925-1965]" ["Two Congenial Hotels Nourished Heart, Soul of State Politics," R-T-D, 6/2/66].

Both hotel buildings are important examples of renowned, Norfolk-based architect John Kevan Peebles' [1866-1934] work. Peebles was among a handful of the most talented and prolific Virginia architects in the 20th century. During a career that spanned from 1892 to 1935, Peebles was engaged in designing some of the most prominent state-owned buildings of the period. These include the two wings of the State Capitol [1906], the University of Virginia's Memorial Gymnasium [1921-24], and the Virginia Museum of Fine Arts [1932-36]. Peebles' designs for the Richmond and Murphy hotels are very good examples of a once-common building type of the period: the early-20th-century, Neoclassical style, high-rise hotel. Both buildings deploy neoclassical ornament, contrasting masonry elements, and highly embellished cornices to create striking architectural compositions. The monumental double-height lobby and 9th floor "Winter Garden" or Ballroom/Assembly Hall remain in modified form at the Hotel Richmond, while evidence of the Murphy Hotel's former glory – molded cornices hidden by dropped ceilings – is more fragmentary. Original drawings and period photographs amply document the consistently high quality embodied by the buildings' exterior and interior spaces during their prime. Built between 1904 and 1913, the two hotels were a direct outgrowth of the prosperity the United States enjoyed during the era known as the American Renaissance. During this period Neoclassicism flowered, popularized by the 1893 Columbian Exposition in Chicago.



Economic growth fueled a sense of infinite potential that encouraged competing entrepreneurs John Murphy and Addie Atkinson to develop well-appointed high-rise hotels that would house politicians, lobbyists, salesmen and tourists with business and other interests at the State Capitol. While Murphy's boasted a one-of-a-kind "sun bridge" with a lounge linking the main hotel building to earlier annex buildings on the west side of 8th Street, Mrs. Atkinson's Hotel Richmond had the city's only Roof Garden. While Murphy's was the local headquarters of the Democratic Party, the Hotel Richmond was for more than 30 years the home of WRVA, Richmond's first radio station, which had the most powerful transmitter between Washington, DC and Atlanta.

That the Hotels Richmond and Murphy were among the city's earliest high-rises speaks to the phenomenal trade these hotels had with politicians, salesmen, and tourists. In contrast, the more elegantly appointed Jefferson Hotel [1895, 1905], another Peebles project [1905 expansion], was sited outside the central business district and primarily served wealthy patrons. The proprietors of the Hotels Richmond and Murphy, Mrs. Atkinson and Col. Murphy, were both extremely successful, self-made business-people who capitalized on building sites adjacent to the center of government and entertainment and close to the heart of local business and financial interests. Unlike the Jefferson, which was financed by Lewis Ginter's wealth as a tobaccoconist, the Murphy and Richmond Hotels were developed by their proprietors, both hoteliers. Col. John Murphy, who immigrated to Richmond from Ireland as a child, developed what became the city's largest hotel from a wooden oyster shack with a few guest rooms. Mrs. Atkinson was one of a very few women who achieved prominence as a leading business person in the city and the state. She honed her skills as a hotel manager in Lynchburg, then achieved renown in Richmond at the helm of the St. James Hotel, then the Lexington Hotel, before building her own high-rise hotel building at the corner of 9th and Grace Streets.

Richmond's other early high-rises were built from 1904 to 1923 to house Main Street banks and businesses. For more than a half-century the eleven-story Richmond and Murphy Hotels were second only to the Capitol as the settings for state and local political activities.

THE HOTEL RICHMOND

The Hotel Richmond site at the northwest corner of 9<sup>th</sup> and East Grace Streets is known for having been the location of a Richmond hotel or tavern from 1797 until 1966. A 1966 newspaper article announcing the hotel's closing, claimed that the site "has boasted hotels longer than any other street corner in America" ["End Comes Quietly at Hotel Richmond," R F-D 6/2/66]. The Hotel Richmond is also significant as a landmark of women's history in Virginia. Its owner, developer, and resident manager from its 1902 conception until her death in 1916 was Adeline Detroit Atkinson [Photo 5.3], described in a 1912 newspaper profile as "the most notable figure in the industrial development of Richmond from a woman's standpoint" ["Women Builders of Big Richmond," RT-D, 7/21/12, Industrial Section, pp1-2].

In 1902 Mrs. A. D. Atkinson, a widow who had managed several hotels in Lynchburg and Richmond, sold the Lexington Hotel at 12<sup>th</sup> and East Main Streets and acquired the St. Claire Hotel at 9<sup>th</sup> and East Grace Streets with the intent of demolishing the existing hotel and building a new one in accordance with the designs of Charleston, West Virginia architect Harrison Albright. Initially rebuffed in her attempts to seek financing and frustrated by what she perceived as unfair city taxes, Mrs. Atkinson,



Photo 5.3: Mrs. Atkinson, the proprietor of Hotel Richmond.

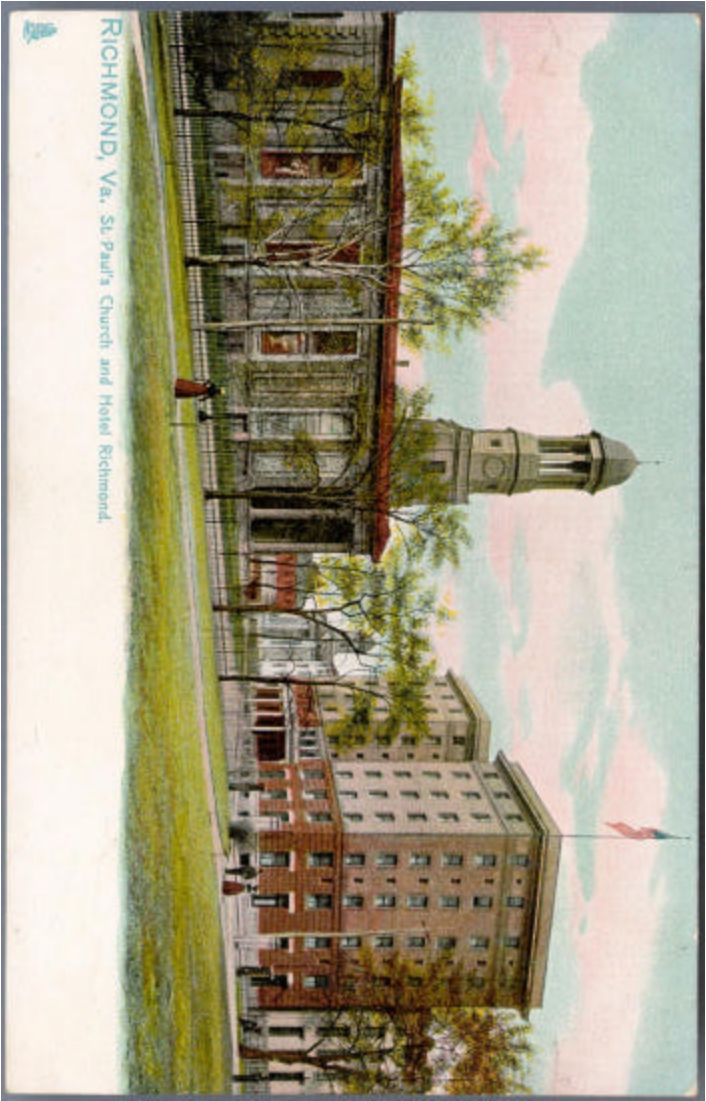


Photo 5.4: The Hotel Richmond prior to the addition, a prominent element in the Capitol Square District.



developed a master plan for the project that included first building the Grace Street half of the hotel and connecting temporarily to a portion of the old St. Claiee Hotel property that had 32 rooms. The first phase of the Hotel Richmond project opened facing East Grace Street with 100 new guest rooms in April 1904. Combined with her earlier achievements in hostelry, the opening of her own hotel at the gates to Capitol Square brought Mrs. Atkinson into the spotlight. In a 1905 article reporting Mrs. Atkinson's fall from a buggy, the Washington Post described her as "one of the best-known women in the State" ["Hotel Woman Fractures Hip," 9/15/05, p. 9]. In 1912 Mrs. Atkinson more than doubled the Hotel Richmond's capacity by completing a \$400,000 expansion including two additional stories, designed by Norfolk architect John Kevan Peebles.

After Mrs. Atkinson's death, which was the lead story in the 12 December 1916 Richmond Times-Dispatch, the hotel continued to flourish. It was often noted as having the only roof garden in the city. The roof-top pergola, visible in early photographs, sketches, and postcards, offered panoramic views of Broad Street and Capitol Square. In 1936 the Hotel Richmond was acquired by Newport News businessman L. U. Noland of Richmond Hotels, Incorporated. Richmond Hotels consolidated the Hotels Richmond and Murphy in the mid-20th-century to create 420 hotel rooms and 60 apartments - in Richmond a capacity second only to the Hotel John Marshall.

In 1966 the Commonwealth of Virginia acquired the Hotel Richmond, including the old Murphy Hotel property, and moved five state agencies into the building. The two buildings came to be known as the 8th and 9th Street Office Buildings.

**Architectural and Historic Significance**

The Hotel Richmond is architecturally and historically significant and may qualify for individual listing in the Virginia Landmarks Register and in the National Register of Historic Places.

The building is associated with events that have made a significant contribution to broad patterns of American history. The Hotel Richmond is located on a site with Richmond's longest record of having been occupied by a hotel or tavern. Hotels or taverns occupied this site from 1797, when Parke Goodall opened Indian Queen Tavern [Scott, Richmond Neighborhoods, p 97], until 1966 when the state moved its offices into the building.

The Hotel Richmond is associated with the lives of persons who have been significant in our past and represents a landmark in women's history, because it was owned, developed, and run by Adeline Detroit Atkinson [1841 -1916] at a time when very few women held prominent positions in commerce. Addie Detroit Atkinson [1841-1916] enjoyed a rare degree of success as an extraordinarily gifted businesswoman. Born Adeline Detroit Wood in Bedford, VA she moved to Lynchburg after marrying John M. Atkinson. When her husband's brick laying trade did not provide enough for a family with six children, Mrs. Atkinson began to accept paying houseguests. Later she worked for the Wall Hotel and became the proprietor of Warwick House in Lynchburg. After moving to Richmond in 1884 she managed several hotels. By the time she bought the 9th and East Grace Street property in 1902 she was a widow. She was not intimidated by local banks' refusal to loan her money for the Richmond Hotel development, but went to New York where she personally secured a loan from banking giant J. P. Morgan. The newspaper described her as "the personification of energy, industry and pluck" ["Lexington Hotel Changes Hands," R T-D, 4/26/03]. In her obituary, the Richmond Times-Dispatch declared that she was "one of the most remarkable women in Richmond." ["Mrs. A. D. Atkinson Died Last Night," R T-D, 12/12/16]. Unlike other turn-of-the-twentieth-century businesswomen,

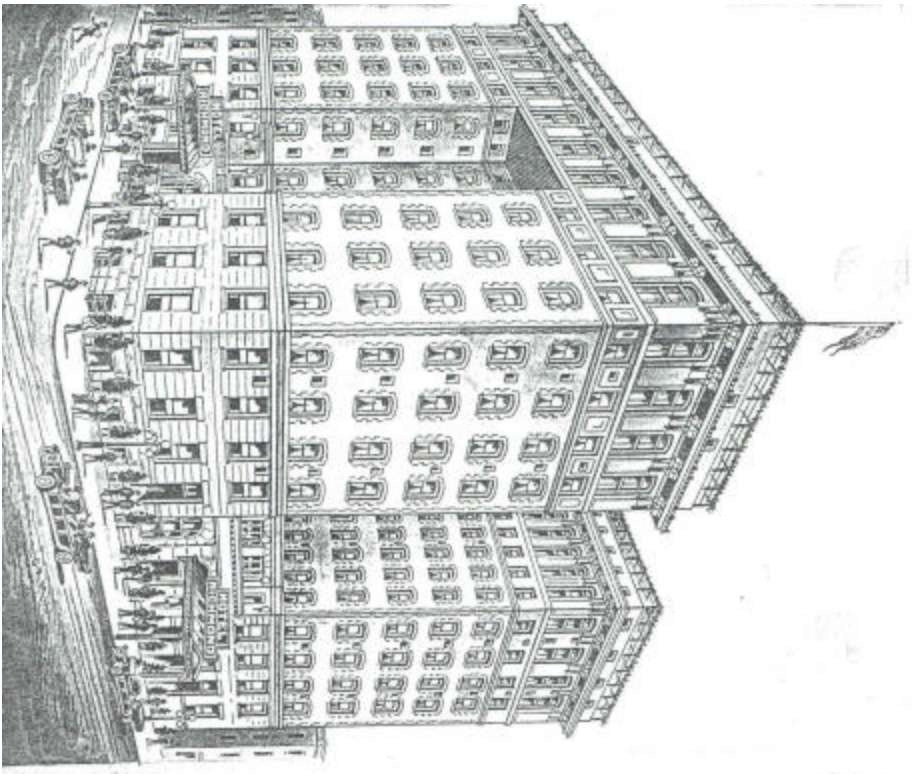


Photo 5.5: A drawing of The Hotel Richmond after the addition was constructed, showing rooftop pergola.

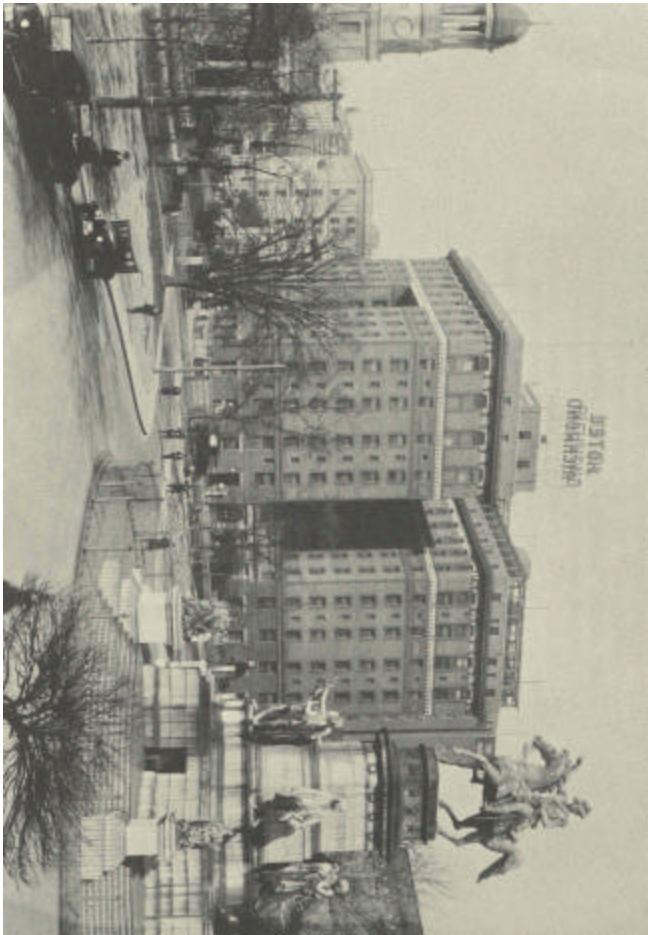


Photo 5.6: View of Hotel Richmond in mid -1920s showing rooftop terrace on north side.

who as widows took over the reigns of a business established by their husbands, like Mrs. Norman V. Randolph of the Randolph Paper Box Company; or ran companies that focused on millinery or food products like Mrs. E. G. Kidd who founded the phenomenally successful Pin Money Pickle Company, Mrs. Atkinson built and operated her hotel at a grand scale overcoming all obstacles, including local banks' refusal to fund her vision. Hers became the hotel where state and local political careers were launched and fostered. Mrs. Atkinson's career preceded that of African-American activist and banker Maggie Walker [1867-1934] by a quarter-century.

The hotel was significant because it was used as headquarters for the Democratic Party's gubernatorial candidates. It was where the Byrd Machine housed five winning candidates for governor: William Tuck in 1945, Thomas B. Stanley in 1953, J. Lindsay Almond, Jr. in 1957, Albertis S. Harrison in 1961, and Mills E. Godwin in 1965. The campaigns were run from Room 370 which had an excellent view of the Capitol and its entry drive. As noted by Sandra G. Treadway [deputy director of the Library of Virginia] in a 16 March 2005 Style Weekly article ["Mrs. Atkinson's Place"], "The kinds of people who stayed with her [at the Hotel Richmond] were running the state of Virginia." The Hotel Richmond played a unique and critical role in the operation of Capital Square.

The headquarters and studios of Richmond's first radio station, WRVA, were housed in a Hotel Richmond mezzanine-level suite from 1933 until 1968, when the station moved to its own building. The third commercial radio station in Virginia, WRVA had the largest audience share and the highest number of broadcast hours of any other radio station in the state. During the first two decades that WRVA broadcast from the Hotel Richmond the station was the primary means by which the public received news, public information, and musical entertainment. When local tobaccoconsists at the Larus & Brothers Company established it in November 1925, WRVA was a community station that broadcast public announcements, weather forecasts, home economics, and educational lectures broadcast two evenings a week in three-hour segments. In 1941 the station began operating 24 hours a day as a wartime service. WRVA affiliated with the National Broadcasting Company [NBC] on January 1, 1929. This association lasted until 1937 when the radio station affiliated with CBS. In 1928 WRVA joined a network of 48 stations, with NBC, as the first radio network to report the results of a US presidential election. After 1939, when it dedicated a powerful new transmitter, the station was known as "the 50,000 watt voice of Virginia." Well-known radio personalities who broadcast from the Hotel Richmond included "Sunshine Sue" and the "Capitol Squirrel". The station played a significant role in Virginia's popular music movements. It was known for many of its musical programs such as the "Corn Cob Pipe Club," the "Old Dominion Barn Dance," the "Sunshine Hour," and the "Silverstar Quartet." The station's broadcasts beginning in May 23, 1933 were from a suite in the Hotel Richmond. This continued until 1968 when the station moved from the Hotel mezzanine to its first purpose-built headquarters on Church Hill. From 1939 and after its relocation to Church Hill, WRVA was the most powerful radio station operating between Washington, DC and Atlanta, Georgia.

The building also embodies "the distinctive characteristics of a type, period, or method of construction," and represents the work of a master. The building is a very good example of the work of Charleston, West Virginia architect Harrison Albright and of Norfolk architect John Kevan Peebles. Peebles' maintained the character of Albright's original hotel design when he added two stories and a nine-story north wing to complete the project in 1912 [Photos 5.5 and 5.6]. The monumental entry lobby with its centered marble stair and stained glass skylight is reminiscent of Peebles' design for the 1905 Main Street lobby at the Jefferson Hotel. Peebles is also known for the 1906 wings at the Virginia State Capitol [with Noland & Baskervill], and



for his work at the University of Virginia [including Fayerweather Hall, Minor Hall, and Memorial Gymnasium], the Virginia Military Institute [including Maury-Brooke Hall], and the Virginia Museum of Fine Arts. The building retains its original neoclassical ornament, much of which is rendered in contrasting masonry colors, with a granite and buff brick base and a copper cornice.

The character of the building's original interior and exterior fabric is well documented in period postcards, broadsides, photographs, and newspapers. Except for the two-story entry lobby and the 9th floor Winter Garden [modified as offices], most of the building's interior character has been lost during the state's occupation of the building. As with the Murphy Hotel, the quality, rarity, and relative integrity of the building's exterior outweigh the loss of interior fabric.

THE MURPHY HOTEL

Located at the southeast corner of 8<sup>th</sup> and Broad Streets in Richmond, Virginia, the Murphy Hotel building is one block west of Capitol Square [Photo 5.7]. The building is on the site of the small, now-demolished Oyster Bar and guest house where Col. John Murphy established his hostelry in 1872 after serving in the Confederate Army. Col. Murphy replaced his two-story frame oyster shack with a mansard-roofed brick hotel building in 1886. Success allowed him to build two annexes on the west side of 8<sup>th</sup> Street in 1902 and 1907, which were linked to the main hotel building by a private enclosed bridge over 8<sup>th</sup> Street. In 1913, a year after the Hotel Richmond completed an expansion to its current size, Col. Murphy demolished the 1886 building and replaced it with the eleven-story H-shaped hotel now known as the 8<sup>th</sup> Street Office Building [Photo 5.8]. Col. Murphy engaged the architect, John Kevan Peebles, who had gained statewide recognition when he designed the two wings of the Virginia State Capitol [1906 with Noland & Baskervill], and the 1905 reconstruction and expansion of the Jefferson Hotel. Even more pertinent, Peebles was architect for the 1912 expansion of the nearby Hotel Richmond.

Architectural and Historic Significance

The Murphy Hotel is an architecturally and historically significant building and may qualify for individual listing in the Virginia Landmarks Register and in the National Register of Historic Places.

Like the Richmond Hotel, the Murphy Hotel is associated with events that have made a significant contribution to broad patterns of American history. The Murphy Hotel [aka Murphy's Hotel] grew to become the largest hotel in the city; a position it maintained until it was surpassed in size by the Hotel John Marshall in 1927. The 1913 building at 8<sup>th</sup> and Broad Streets was the main hotel building. It was linked to two earlier annexes on the west side of 8<sup>th</sup> Street by an enclosed bridge [demolished in 1942], a unique siting room overlooking pedestrian and vehicular traffic. In the mid-20<sup>th</sup> century the Richmond Hotels, Inc., which acquired the Murphy in 1939, combined facilities at the Hotels Murphy and Richmond to create a single hotel that was linked through the center of the city block. The state acquired the property in 1966.

The hotel is historically significant because it was used as the state and city headquarters for the democratic party. It was where freshman state senator Harry Flood Byrd stayed when he arrived in Richmond for his first General Assembly session in 1916. Through his political machine, Byrd controlled politics in Virginia for decades and became “the most powerful political leader in 20<sup>th</sup>-century Virginia” [The Library of Virginia web site

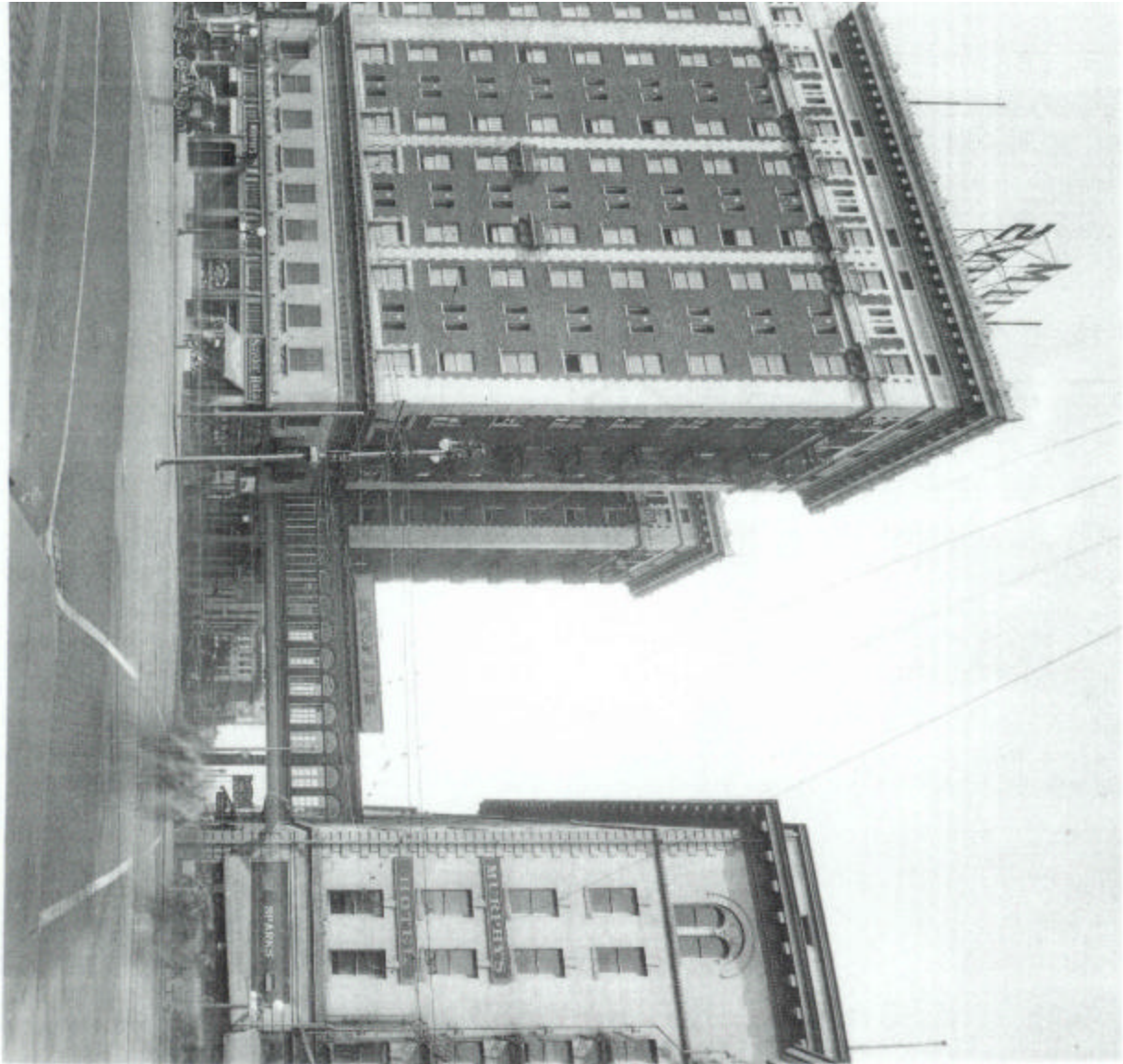


Photo 5.7: View of Murphy Hotel from Broad Street after the first floor openings had been modified.





Photo 5.8: in 1913, Confederate Army Col. Murphy replaced the 1886 building with the 11-story H-shaped hotel now known as the 8<sup>th</sup> Street Office Building.



Photo 5.9: The original lobby of the 8<sup>th</sup> Street Building.

[http://www.lva.lib.va.us/whoweare/exhibits/political/parry\\_byrd.htm](http://www.lva.lib.va.us/whoweare/exhibits/political/parry_byrd.htm)].

The building also embodies the distinctive characteristics of a type, period, or method of construction, and represents the work of a master. The Murphy Hotel building is a very good example of the work of John Kevan Peebles. Unlike his projects at the Jefferson Hotel, the Hotel Richmond, and the Virginia State Capitol, the Murphy Hotel was wholly designed by Peebles’ firm. Peebles is also known for his work at the University of Virginia [including Fayerweather Hall, Minor Hall, and Memorial Gymnasium], the Virginia Military Institute [including Maury-Brooke Hall], and the Virginia Museum of Fine Arts.

The building has good exterior integrity and at this time retains its elaborate neoclassical ornament, much of which is rendered in off-white glazed terra cotta. This excellent example of terra cotta ornament includes quoins, window frames, and most striking of all, a heavily decorated deep cornice and frieze, a rare remnant in Richmond’s downtown. As noted by architectural historian Edwin Slpek, “The 8<sup>th</sup> Street Building provides a textbook case of how classicism was corralled into serving early skyscraper design” [“Architecture,” *Style Weekly*, 4/17/02].

The character of the building’s original interior and exterior fabric is well documented in period postcards, broadsides, photographs, and newspapers [Photo 5.9]. Much of the building’s interior character has been lost during the state’s occupation of the building. However, the quality, rarity, and relative integrity of the building’s exterior outweigh the loss of interior fabric. Deterioration of the terra cotta is the greatest ongoing threat to the building’s integrity.

When this 1913 building was constructed, Murphy’s Hotel was the tallest building on Broad Street [the Central Fidelity Bank Building wasn’t built at 3<sup>rd</sup> and Broad Streets until 1929].

**TYPICAL HOTEL BUILDINGS OF THE PERIOD: A BUILDING TYPE**

Both the Richmond and Murphy Hotels are significant as typical hotel buildings of the early 20<sup>th</sup> century that were among Richmond’s earliest high-rise structures. Both hotels combined early skyscraper design with traditional neoclassical detailing. Typical of the early skyscraper design, the Richmond and Murphy Hotels have a “U” and “H”-shaped plan respectively to bring daylight into the center of a tall urban building. The plan allowed larger numbers of guest rooms on the upper floors. Both hotels had impressive lobbies and other public spaces. The Hotel Richmond and the Murphy Hotel remain rare surviving examples of this important building type in Richmond.

**CHARACTER DEFINING FEATURES**

**8th Street Building**

The exterior character of the 8<sup>th</sup> Street Office Building is defined by several elements which remain intact:

- elaborately detailed neoclassical upper and lower terra cotta cornices and friezes on the 8<sup>th</sup> Street and Broad Street Elevations;
- the contrasting interplay of red brick with white terra cotta and limestone trim;
- wide, bold horizontal bands of terra cotta and limestone at the base and terra cotta at the top, capping the



building, with vertical terra cotta and brick elements in between. The base consists of a two-story limestone podium with a granite water table capped with a richly detailed terra cotta cornice and frieze at the third floor. The building is crowned with a two-story terra cotta entablature with a deep cornice. The brick between the wide base and crown is delineated with punched window openings and organized with vertical terra elements including wide quoins at the corners.

- the “H” - shaped floor plan, typical of early skyscraper design;
- and what, at the time it was built, was “high-rise construction” typical of it’s urban hotel use type.

**9th Street Building**

The exterior of the 9th Street Office Building is characterized by:

- expansive brick walls with punched segmental arched openings;
- buff brick facades with contrasting brown/red brick window surrounds, quoins and a horizontal band at the 8th floor that originally crowned the building. Early drawings and photographs suggest that the base, which extends to the third floor, consisted of the brown/red brick with two courses of granite below the first floor windows.
- When two stories were added to the building in 1912, new materials were used including a horizontal band of white terra cotta above the 8th floor and at the 10th floor window heads. A deep copper cornice with neoclassical detailing and large brackets was added at the 11th floor. The paired brackets frame decorative marble panels, which in turn frame the two-story windows.
- finely articulated brick and stone entrance;
- and a “U”-shaped floor plan, typical of early skyscraper design.

The interior is defined by:

- the ornamental double-height lobby with grand marble stair and a stained glass laylight;
- a double-height ballroom, with a coffered plaster ceiling and pilasters framing the arched windows.
- the character and detail of the original hotel hallways.

**HISTORIC INTEGRITY OF THE TWO HISTORIC STRUCTURES**

**8th Street Building**

From a distance, the 8th Street Office Building looks as it did decades ago – and most of the character defining exterior elements remain intact. On closer observation, a number of changes to both the interior and the exterior of the building are visible. These include the following:

**Exterior**

- modification of the storefront and mezzanine windows: removal of original, arched openings with neoclassical detailing at the first floor;
- removal of fire escapes and balconies;
- significant loss of terra cotta modillions from the lower cornice;
- relocation of the primary entrance from Broad Street to 8th Street;

- infilling of windows and particularly small windows that formerly served bathrooms on the upper levels;
- replacement of original eight-over-one double-hung wood windows with one-over-one double-hung aluminum windows;
- and removal of brick below most windows to accommodate air conditioner units.

Interior

- infilling of the double-height lobby and dining room by extending the mezzanine floor [the exact date is unknown, but thought to predate the purchase of the building by the Commonwealth];
- relocation of the primary stair to the mezzanine level to the west side from the building;
- and removal of hotel room and bathroom partitions on the upper levels.

Essentially, all significant interior defining characteristics have been lost, although the original coffered ceiling from the lobby exists above a lay-in ceiling on the mezzanine level and could potentially be restored.

9<sup>th</sup> Street Building

Exterior

The modifications to the exterior of the 9th Street Building include:

- removal of fire escapes and balconies;
- replacement of wood double-hung windows with aluminum double-hung windows;
- removal of brick below most windows to accommodate air conditioner units;
- replacement of original entrances including the addition of an incompatible and visually intrusive parapet above the 9th Street entrance;
- infilling of original windows with brick;
- the ashlar stone and brick base of the building, originally dark in color, has been painted a buff color;
- and the rooftop pergola was removed.

Interior

The original interior of the 9th Street Office Building is significantly more intact than the interior of the 8th Street Building:

- on the interior of the 9th Street Building, the most significant space, the lobby [or Palm Court], is substantially intact. The largest loss to the space has been the covering of the skylights that formerly lit the stained glass laylights. What was most likely a polychromatic paint scheme has been painted a uniform white;
- on the 9th floor, the former ballroom or Assembly Room has been filled with a series of offices defined by partitions and a suspended lay-in ceiling. Above the ceiling, the full height of the space can be seen, including original pilasters and coffered ceiling. The double-height windows, though infilled on the exterior, are clearly visible on the interior. This space could easily be returned to its original configuration, and additionally, the typical corridors on the upper floors retain most of their original feel through architectural detail such as door casings.

## 6. REUSE POTENTIAL OF THE HISTORIC STRUCTURES

### 8<sup>TH</sup> STREET OFFICE BUILDING

The 8<sup>th</sup> Street Office Building, formerly the Murphy Hotel, was constructed in 1913. When first built it was the tallest building on Broad Street. The building retains its elaborate neoclassical ornament. It is primarily brick with white terra cotta trim. The rich terra cotta ornament includes quoins, window surrounds, and deep cornices and friezes at the second floor and roof level. Vertical terra cotta and brick elements link wide, bold horizontal bands of terra cotta and stone at the base of the building to a wide horizontal band of terra cotta that caps the building. The building became an office building when purchased by the Commonwealth in the 1960s [Photos 6.1 and 6.2].

#### Assessment of Existing Conditions

The condition survey was conducted on a two-day site visit on April 26 and 27, 2005 by Lisa Soderberg of Hillier, Susan Reynolds and John Matteo of Robert Silman Associates and Hugo Vera of Loring Consulting Engineers. The primary survey method of the building exterior was visual inspection from the ground. Upper portions of the walls were observed with binoculars and from the roofs. Suspicious areas were further investigated and exposed using scratch awls and other tools. The interior systems were observed from interior spaces without conducting probes and removing finishes etc. The following summary is based on the site observations.

#### Exterior Building Envelope

##### Figures 6.1 -4

The 8<sup>th</sup> Street Building envelope is largely intact and, as a whole, appears to be in fair condition. The building exhibits deterioration that is consistent with its age, the materials used, and the specific type of construction. The majority of the deterioration appears to result from water infiltration, weathering, and general deterioration of the façade materials over time. There are localized areas of marked deterioration, which can be attributed to the absence of any cyclical maintenance measures over a long period of time. The damage and distress is concentrated at the corners of the building, at the cornices, roof parapets and window lintels and include open and deteriorated joints, and cracked, spalled, and missing terra cotta elements.

#### Masonry

The exterior wall is a composite system of load-bearing masonry with embedded steel or iron columns. This type of hybrid system combines elements of traditional masonry building and contemporary curtain wall construction.

#### Terra Cotta

Distress in the terra cotta was noted primarily at the corners of the building, at the cornices and at the window heads. Mortar loss is generally the first sign of an aging masonry wall system. There are numerous open and deteriorated joints throughout the masonry walls at the 8<sup>th</sup> Street Building, but particularly at the terra cotta elements.



Photo 6.1 : 8<sup>th</sup> Street Building, Broad Street Elevation.



Photo 6.2: 8<sup>th</sup> Street Building, 8<sup>th</sup> Street Elevation.





Photo 6.3: Distress in the terra cotta was noted at all corners of the building. At some locations the cracks are wide.



Photo 6.4: There is evidence of displaced terra cotta units at the northeast corner of the building.



Photo 6.5: The upper cornice appears to be in fair condition. The terra cotta elements directly below the roof level appear to be stable and will probably require only minor repairs.

The damage noted at some of the terra cotta masonry is of some concern, because it suggests that the damage may be caused by the oxidation of ferrous metal within the walls. Typically, the ferrous metal exists in the masonry as anchors and supports. The problem with ferrous metals is that, when they rust, they expand and, in expanding, they exert large enough stresses on the masonry to cause it to crack or be displaced. It is axiomatic that the damage caused by the embedded ferrous metal elements occurs in the presence of water, so the distress noted in the terra cotta is indicative of the presence of moisture within the walls. Unfortunately, there are no easy solutions to this problem. One can either expose, clean and paint the steel with rust inhibitive paint and rebuild the masonry, at significant monetary cost and at great cost in damage to the existing building fabric; or one can attempt to eliminate the conditions that promote the rusting of the anchors or supports. The repair solutions for the conditions at the 8<sup>th</sup> Street Building may be a combination of both approaches.

The latter is a conservative approach to the problem based on preventing water from contacting the metal and, thus forestalls the oxidation. This can be attempted largely through appropriate maintenance practices with attention to regular timely inspections and relatively short cyclic maintenance periods. This approach is labor intensive, and does not guarantee that there will be no future damage, but may effectively slow the destructive processes. Although it will not be possible to completely halt the oxidation of the ferrous anchors, repointing and more vigilant maintenance will significantly minimize the amount of water intrusion in the wall and slow down the process.

The corner exterior steel or iron columns embedded in the exterior walls are causing cracking in the corner terra cotta units [Photo 6.3]. There is evidence of displaced terra cotta units at the northeast corner of the building [Photo 6.4]. The repairs may include removing the cracked terra cotta units, exposing, cleaning and repainting the steel with rust inhibitive paint and the installation of new terra cotta units matching the dimensions, color and texture of the original units. There should be a void between the steel and the terra cotta assembly to allow for some movement/expansion without cracking the masonry. Other repairs may include stabilizing the cracked units and sealing the cracks with emseal, backer rod and sealant to provide for continual movement and multiple and redundant layers of protection from water infiltration. If it is determined that there will be continued movement at the corners, consideration might be given to the installation of an expansion joint at the corners.

The upper cornice appears to be in fair condition [Photo 6.5]. The cornice cantilevers approximately five feet over the exterior face of the brick wall and is supported by steel outriggers at the roof level. The outriggers are encapsulated in cast-in-place concrete. In some locations, the concrete is spalling off of the steel beams and may need to be replaced with concrete or another fireproofing material. The terra cotta units in the roof cornice above the top of the roof slab are experiencing moderate cracking and displacement with wide, open and deteriorated joints [Photos 6.9-6.12]. We recommend that the terra cotta units above the roof be disassembled. All rust should be removed from the steel. The steel should be cleaned and painted with a rust inhibitive paint. The units that are cracked beyond repair should be replaced with a similar or identical material matching dimensions and profiles exactly. Terra cotta units that are salvageable shall be repaired and reinstalled. Cracked terra cotta shall be repaired with epoxy and spalled units shall be repaired with composite patch material and a glaze coating. Because of the fragile nature of all terra cotta assemblies and their susceptibility to damage caused by water infiltration into the clay body, we recommend that lead joint covers be installed at all weather joints at all terra cotta coping units.





Photo 6.6



Photo 6.7



Photo 6.8

Photos 6.6, 6.7, 6.8: The terra cotta units in the lower cornice at Level 3 are in poor condition. Approximately 10% of the modillions have already fallen from the lower cornice, and approximately 70% of the modillions have cracked.



Photo 6.9: Cracked terra cotta units at upper cornice.



Photo 6.10: Open, deteriorated joints are typical at all terra cotta elements.



Photo 6.11: The upper cornice appears to be in fair condition.



Photo 6.12: Cracked terra cotta units at upper cornice.





Photos 6.13 and 6.14: Details of masonry distress at penthouse. The distress includes corroded and deformed lintels. The steel or iron columns in the walls have caused the masonry to crack at the corners of the penthouse.



Photo 6.15: The penthouse is in poor condition. Terra cotta units are cracked throughout the parapet.

The terra cotta elements directly below the roof level appear to be stable and will probably require only minor repairs including repointing and minor spall repairs [Photo 6.5].

The terra cotta glaze has a matte finish, which approximates the color and texture of the stone at the base of the building. However, the molded terra cotta elements, which were hollow cast clay blocks with internal compartment-like stiffeners called webbing were lighter and cheaper to produce than the carved stone masonry units evident at the first floor level. Terra cotta assemblies are particularly susceptible to deterioration if water infiltrates through the glaze into the clay body. Glazed terra cotta units are damaged by such complex water-related deterioration problems as glaze crazing, glaze spalling and material loss. There is evidence of some glaze crazing and spalling at the roof cornice. Repairs to the glaze crazing would include covering the terra cotta with a glaze coating.

The terra cotta units in the lower cornice at Level 3 are in poor condition [Photo 6.7]. Each modillion is supported by a pair of double angles that backspan into the masonry wall [Photo 6.6]. The double angles are assumed to be attached to vertical dowels. Open, deteriorated joints have allowed water to infiltrate the terra cotta assembly, exposing the steel to conditions favorable to corrosion and the expansive pressures of oxide jacking, and causing the surrounding terra cotta to crack. Approximately 10% of the modillions have already fallen from the lower cornice [Photo 6.6], and approximately 70% of the modillions have cracked [Photo 6.8]. This cornice requires selective disassembly. The corrosion must be arrested by exposing and cleaning the steel, and the subsequent application of a rust converter to impede future corrosion. If the corrosion encountered during selective disassembly is severe enough that a significant portion of the cross section has been lost, the steel angles should be replaced by a galvanized steel resistant to corrosion. Similar to the upper cornice, the terra cotta units should be repaired if salvageable. Every attempt should be made to salvage and reinstall units. All other units should be replaced in-kind or with a similar material matching dimensions and profiles of the original units.

The terra cotta parapet at the penthouse is in poor condition. There is evidence of open joints and cracked, spalled and displaced units [Photo 6.15]. The parapet should be disassembled and reconstructed, replacing cracked units with new units matching the profiles and dimensions of the original. Because the penthouse is not visible from the ground level, another alternative that might be considered is to dismantle the terra cotta parapet and to rebuild it in brick. The steel or iron columns embedded in the walls are causing the masonry to crack at the corners of the penthouse. The corners should be stabilized and the cracks should be sealed to prevent water infiltration [Photo 6.14].

Cracked Terra Cotta Window Surrounds: Refer to lintels below.

#### Brick

The brick generally appears to be in satisfactory condition, although it requires stabilization in a few areas. There are also areas of the brick where repointing will be required.

The openings cut for air conditioning units have been a continual source of water infiltration causing distress in the adjacent masonry including open joints and cracked terra cotta [Photos 6.17 and 6.18]. The best solution for the building is to remove





Photo 6.16: Damaged terra cotta under metal balconies where metal fire escapes were located.



Photo 6.17: Many of the cast stone sills have cracked and spalled, exposing corroded Reinforcing bars.

the grilles entirely and infill the openings with brick. If that is not possible the joint between the grille and the masonry opening should be sealed.

### Other Masonry Conditions

#### Cast Stone Sills

Several of the cast stone sills exhibit distress. The concrete has cracked and spalled, exposing corroded reinforcing bars. Cracked or spalled sills should be replaced with new cast stone or stone sills. It may be cost effective to replace the deteriorated sills with stone sills.

#### Lintels

The steel lintels in the majority of the building are in good condition due to the detailing of a drip edge at the top of the masonry opening [Photo 6.19]. There is evidence of cracked terra cotta associated with the expansive forces of oxide jacking at the steel lintels on the Broad Street elevation only [Photo 6.18]. Water infiltration may be associated with the air conditioning panels cut in above the windows. We recommend that the cracked terra cotta and adjacent brick be removed around these steel lintels. The steel should be cleaned to bare metal. A rust inhibitive paint should be applied to the steel and new terra cotta units matching the dimension and profiles of the original should be installed.

The steel lintels in the penthouses and bulkheads are rusting and causing distress to the surrounding masonry [Photo 6.13]. We recommend that the brick masonry around these steel lintels be temporarily removed. The existing steel lintels should be removed and replaced by a galvanized steel resistant to corrosion. If the windows are not required at this location, the lintels could be removed entirely and brick could be reinstalled in the opening.

#### Miscellaneous Steel

Original metal fire escapes and balconies have been removed. On the west façade, the minor steel framing members used to support the removed balconies were cut at the exterior face of the building [Photo 6.16]. The miscellaneous steel that was used to support the previously existing steel balconies should similarly be removed from the building façade.

There are corroded ferrous metal straps on the Broad Street elevation that once supported signage. We recommend that the straps be removed and that the masonry be repaired with stone Dutchman or composite patch materials matching the color and texture of the adjacent stone.

#### Sidewalk Vaults

Deterioration is prevalent directly below the north and west sidewalks. In these locations, the concrete encased steel beams are exposed to active water infiltration due to inadequate drainage and water protection details. As a result, the steel beams are severely corroding. Oxide jacking is causing the concrete cover to spall, exposing the beam. Similarly, the underside of the reinforced concrete slab is spalling, exposing the reinforcing bars, which are also corroding [Photo 6.20].





Photo 6.18: There is evidence of cracked terra cotta associated with the expansive forces of oxide jacking at the steel lintels on the Broad Street Elevation only. Water infiltration may be associated with air conditioning panels cut in above the windows.



Photo 6.19: Most steel lintels are in good condition due to the detailing of a drip edge at the top of the masonry opening.

In order to stabilize the structure in these areas, an extensive wood shoring system of pressure-treated posts and joists has been installed [Photo 6.21]. The wood shoring appears to be adequately strong and is in good condition. The source of water infiltration should be arrested, appropriate water protection measures should be installed and the existing structure should be reinforced as necessary.

### Windows

The original windows were typically eight-over-two or possibly eight-over-one wood double-hung windows. Some of the original windows remain on the rear facades [ie. the South Elevation]. Most of the original windows were replaced in the 1970s with one-over-one double-hung aluminum windows [Photo 6.18]. All of these windows are at the end of their useful life. Several of the small windows, which were formerly bathroom windows, have been infilled with brick. The window openings at the location of the original fire escapes have been covered with plywood.

We recommend that all of the windows be replaced with new high quality custom-made aluminum clad wood windows and frames to match the profile and dimension of the original windows. The new windows should be eight-over-two double-hung windows with simulated divided lights. All aluminum clad wood windows would have a high performance factory-applied finish with a warranty of 20-30 years and an assumed effective life span of +/- 50 years.

If federal funds or tax credits are being considered for use in the rehabilitation of the building, it will be necessary to meet the “Secretary of the Interior’s Standards for Rehabilitation.” The “Standards for Rehabilitation” considers the aluminum clad wood window a suitable replacement for historic double-hung wood windows. The Secretary of the Interior’s Standards state that “if using the same kind of material is not technically or economically feasible when replacing windows, then a compatible substitute material may be considered. ” The Standards recognize that for certain types of large buildings, particularly high-rises, aluminum windows may be a suitable replacement for historic wood sash provided the installation of wood replacement sash is not practical and the design detail of the historic windows can be matched exactly.

### Roofing

The existing roof is past the end of its useful life and should be replaced. Some of the beams supporting the roof structure exhibit spalling, which is most likely caused by localized water penetration through the deteriorated roofing and flashing.

We recommend that the existing roof be removed and replaced with a new roof with a minimum 30-year warranty. All flashings, counterflashings, and downspouts should be replaced with lead coated copper or terne coated stainless steel. The existing rainwater conduction system should be investigated and analyzed to ensure that it is sized properly.

### Building Interior

The interior of the 8<sup>th</sup> Street Building has been significantly modified since its construction. Most significantly, the double-height lobby and dining room have had floors inserted at what was originally the mezzanine level. The grand center stair was replaced by a new stair on the west side of the lobby. The guest room bathrooms have been removed and many of the original small bathroom windows infilled. Interior partitions have been removed and reconfigured to accommodate office

functions. Dropped ceilings have been added throughout the building. The building has only one egress stair, which does not meet current Code requirements in either configuration or count. The building is only partially accessible. Although the elevators meet accessibility requirements, the machinery is at the end of its useful life. If renovated, all life safety elements would require replacement or upgrading. Asbestos-containing materials are known to exist in the building. This, and other hazardous materials, are inherent in buildings of this age and must be carefully addressed before any renovation begins.

**Structural System**

The Eighth Street Office Building is a steel frame structure with floor structure consisting of tile and one-way concrete joist slabs. The perimeter steel columns are embedded in the exterior masonry wall. Interior floors are supported on a regular grid of steel columns founded on reinforced concrete spread footings. The column grid typically varies between 12'-7" and 15'-6" spacings. Refer to Drawings 1 through 3 on page B-1 of Appendix B for typical floor construction.

Two types of foundation walls were noted: unreinforced loadbearing masonry walls and reinforced concrete load-bearing walls. In general, based on an overall inspection of the visible portions of the structure, the foundation appears to be in satisfactory condition. No signs of settlement were noted.

**Building Systems**

The building is currently served by a combination of condenser water system and self contained packaged air conditioning units. A cooling tower is located over the 2<sup>nd</sup> floor lower roof. Supply and return condenser water pipes are routed in the building to several water-cooled heat pumps serving the open public areas, corridors and office spaces in the 1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup> floors. All individual spaces in the upper floors are served by wall-mounted heat pumps. Additional perimeter heating is provided by a hot water loop originating in the basement of the 9<sup>th</sup> Street Building. No steam is used at this building. The building does not use chilled water or steam from the plants that serve a number of other Capitol Square buildings.

The electrical service to this building and all electrical equipment and wiring are approaching the end of their usable life. The existing mechanical, electrical, plumbing and life safety systems in the 8<sup>th</sup> Street Office Building are of a wide variety of ages, condition and Code compliance. Any significant reuse of the building should include a complete system replacement.

**Floor Plate and Sectional Analysis**

The 8<sup>th</sup> Street Office Building consists of 11 floors, plus cellar and attic. The typical floor-to-floor dimension on the upper floors is 10'-7 1/2". The first and second floors have a floor plate of 12,400 square feet. The upper floors contain a floor plate of approximately 9,500 square feet, arranged in an "H" configuration, with vertical circulation and services located in the center. The building structure has a grid of roughly 12'-7" x 15'-6" at its greatest. Figures 6.5 and 6.6.



Photo 6.20: Underside of slab in sidewalk vault. Deterioration is prevalent below the north and west sidewalks.



Photo 6.21: Ann extensive wood shoring system of pressure-treated posts and joists has been installed in the sidewalk vault area.

**Below Grade Construction Limitation**

A soils report prepared as part of a previous development scheme determined that groundwater may be an issue for construction below-grade. Groundwater was registered at approximately 22-24’ on the parking lot site. The project was designed with three levels of parking below-grade, and consideration was being given to providing only two levels due to this concern. The issue has also been raised with the restoration of the Capitol and construction of the Capitol Extension. Groundwater issues can be overcome by selected construction methods, but it can result in a significant increase in construction costs.

It would be possible to add additional levels beneath the 8<sup>th</sup> Street Building, although the cost of underpinning the existing foundations would make this option unacceptably expensive. Similarly, any below grade construction on the existing parking lot site may require the underpinning of the 8<sup>th</sup> Street foundations.

**Impact on Adjacent Structures**

Per discussions with Father Robert Brownell of St. Peter’s Church, it is believed that the foundations of the church consist of wooden piles, rather than masonry footings. As the building is constructed at the property line along the 8<sup>th</sup> Street Office Building, any adjacent excavation is of concern – underpinning may be required, depending on depth. The church is also concerned with the impact of demolition of either the 8<sup>th</sup> or 9<sup>th</sup> Street buildings, as the building has significant stained glass windows by Franz of Munich, a well-known stained glass studio. Before the demolition of the buildings occupying the site of the new federal court house across 8<sup>th</sup> Street, the church expressed concern over plans for the implosion of the existing buildings on the site and the method of demolition was reportedly changed to traditional methods. These concerns regarding the stained glass also exist for St. Paul’s Church, directly to the south of the 9<sup>th</sup> Street Building. Obviously, care must be taken in considering the demolition of either of the buildings. Figure 6.7.

**REUSE OPTIONS:**

The 8<sup>th</sup> Street Office Building could be adaptively reused for any number of functions, most notably offices, hotel and apartments. The 8<sup>th</sup> Street Building could easily accommodate retail on the first floor by reactivating original storefront windows and doors. Each use has impacts on the building when adapting to existing conditions.

**Preservation of the Existing Structure: Limitations and Opportunities**

**Floor Plate**

Due to its relatively narrow structural spans, the floor plate of the 8<sup>th</sup> Street building works best for hotel or residential functions, where wide, clear spans are not required. The building is somewhat less successful when used for office functions for this same reason. The relatively tight structural grid limits flexibility in the office planning that is the norm for today’s standard. New office construction typically has clear spans of 20-30 feet. However, the existing interior partitions could be removed to



create open areas with only structural columns, as the partitions are not loadbearing.

The most significant challenge is meeting current Code requirements for egress. Regardless of the final use, one additional egress stair would be required, as well as the reconstruction of the existing stair to meet Code. The exact location of the stair would need to be coordinated with the final use for the building.

Although less than present-day standards, the typical floor-to-floor dimension of 10'-7 1/2" is adequate to accommodate upgrading of existing building systems to meet current requirements.

Floor Loading

This building is well documented with original drawings and specifications. The team reviewed relevant selections from these documents, including structural drawings and structural specifications, to make a general assessment of the existing structural system.

The following Live Load capacities are itemized within the original specification. Selective calculations were performed, looking at both floor slab construction and selected steel floor beams and has found initial results to concur with the loads indicated in the specifications. As such, we present the original live load indications as an acceptable basis for initial planning for the future use of this building.

Room / Floor Type	Allowable Live Load Capacity
Pent House Roof	75 psf
Roofs	60 psf
Attic	50 psf
Bed Room Floors	60 psf
Mezzanine & Main Floors	90 psf
Sidewalk	300 psf
Driveway	600 psf

Of particular interest is the value stated for Bed Room Floors. This is representative of the typical floor construction that would potentially be converted to office use. For office use, the live load requirement as stated in the International Building Code 2000 is 50 psf, with provision for an additional 20 psf for moveable partitions [70 psf total]. Although the existing live load capacity stated above and in the original specifications is only 60 psf [14% less than needed by current code], there are several approaches which may result in achieving the required value:

- A more refined structural analysis of the existing system may show higher capacities. Preliminary calculations show the existing floor system, as defined in the original documents, to have a live load capacity of approximately 64 psf [9% less than needed by current code] while analysis of the typical steel framing, indicates live load capacities generally greater than the required 70 psf. Materials testing and exploratory probes would provide a more precise assessment of existing capacity.

- The original specification indicates that over the structural slab, each floor typically has 3 ½” of finishes and fills. At the Bed Rooms, it states that these materials result in 35 psf of dead load on the slab. The fills consist of cement or cinder fill, with wood sleepers set below areas of wood flooring. This material can potentially be removed and replaced with a lighter finish system in order to recapture the additional live load required.

**Lateral Load Resistance**

Typical of steel frame buildings of this era, lateral forces such as wind or earthquake were assumed to be adequately resisted by the masonry infill used to construct the exterior and lightcourt exterior walls. If the extent of renovations leads to a requirement to upgrade this building to meet current code, it is reasonable to expect a requirement for some structural modifications.

**Structural Changes: Additions and Removals – Limitations and Opportunities**

Structural concerns addressed above include the impact of underpinning required if modifications are made below the existing foundations or adjacent to St. Peter’s Church.

The use of columns as opposed to bearing walls offers additional flexibility of interior reconfiguration that the Ninth Street Office Building lacks.

The tile and one-way concrete joist slabs provide a relatively compact system that can be penetrated or resupported for new openings in a variety of ways. Small penetrations can be located between ribs with little structural implication. Generally, if ceiling heights permit, larger openings in the floor slab can be supported on new steel beams set below the slab around the perimeter of the new opening. The new steel would frame into the sides of the main steel beams at the column lines.

Widening existing elevators or introducing new shafts will require the following structural items:

- New reinforced concrete elevator pit with mat foundation. Care will need to be taken regarding the relative elevations of the new pit foundation to the existing column or wall footings. Depending on the depths of existing foundations and the proximity of the new pit, localized underpinning may be required.
- New steel floor framing would be introduced at each penetrated floor level. When new beams frame into existing at such larger openings, reinforcement of existing members may be required. Consideration should be given to the effectiveness of using the new shaft walls as bearing walls for the penetrated slab. If so, the wall would likely be CMU.
- The elevator shaft could be constructed of CMU or shaft wall [if non-load-bearing], however accommodation will need to be made for elevator rail support at regular intervals along the shaft height. If the elevator penetrates the existing roof, a new bulkhead construction will be required.



Structural Reinforcement

Reinforcement of steel beams and columns can be performed in a number of ways, generally through the addition of new steel plate or other sections welded to the existing. A metallurgical analysis should be performed to confirm the weldability requirement of the old steel. Slabs can be reinforced either by introducing new tensile material such as carbon fiber or steel plate along the underside. Alternately, spans can be shortened by introducing intermediate steel members.

Building Systems

Two options are recommended for new HVAC systems for the 8<sup>th</sup> Street Building as offices:

- Alternative 1 - Central plant chilled water system w/cold air distribution. The cooling towers would be located on the roof of the building and water-cooled chillers could be located on a new penthouse structure or in the basement. Supply and return low temperature [38 F] chilled water pipes would be routed vertically on both sides of the main corridor from the basement to the penthouse. Several variable volume air handling units [AHU's] would be installed at each level to provide cold air to perimeter fan powered terminal units. These units will include a heating element and would be installed in a vertical position at each window. The supply air would be distributed in the level below and would penetrate the slab to the appropriate terminal unit. This alternative would minimize horizontal ductwork distribution throughout the floor and reduce the size of the mechanical equipment. Outside air [OA] for ventilation would be provided at each mechanical room to meet the minimum ventilation requirements. CO2 sensors would control quality of outside air to meet minimum ventilation requirements.

- Alternative 2 - Conventional central plant chilled water system. The cooling towers would be located on the roof of the building and the water-cooled chillers could be located on a new penthouse structure or in the basement. Supply and return chilled water pipes would be routed vertically on both sides of the main corridor from the basement to the penthouse. Several variable volume air handling units [AHU's] would be installed at each level to provide conditioned air to the open office areas at each side of the main corridor. The units will include a heating element. Outside air [OA] for ventilation would be provided at each mechanical room to meet the minimum ventilation requirements. CO2 sensors would control quality of outside air to meet minimum ventilation requirements. The units would include a heating element.

Toilet and general exhaust would be routed to the roof and discharged through a roof opening to be architecturally coordinated.

A complete new electrical system will be required. The service would be 480Y/277-volts, 3-phase, 4-wire, 2500-ampere, served from a Dominion Power vault-mounted transformer. The main service feeder would be copper conductors in a duct bank. The service equipment would consist of a main bolted pressure switch, main surge suppression, provisions for Dominion Power metering, provisions for retail metering, customer metering, and feeder circuit breakers.

Power would be distributed to the floors and main mechanical equipment locations by aluminum power bus duct. Each floor

will have at least one electrical closet consisting of the bus riser, a 480Y/277-volt panel serving lighting and mechanical equipment, a transformer and 208Y/120-volt panel for general purpose electrical loads, a k13 transformer and isolated ground 208Y/120-volt panel for sensitive loads, and a ground riser and ground bar. This room would also serve miscellaneous electrical equipment including fire alarm terminal cabinets and security panels.

Major mechanical equipment locations shall include either distribution panels and combination starters and VFDs, or Type 2, class B motor control centers. Distribution to major mechanical equipment would be copper conductors in EMT, with flexible conduit for the final connection. Branch circuit wiring, where concealed, shall be copper conductors in type MC cables.

Emergency power would be from a self-contained, diesel engine generator with associated distribution and transfer switches. This would power all required life safety systems and one elevator. The size is estimated to be 200 kW.

Lighting would be high efficiency fluorescent fixtures with ratings and controls designed to meet or exceed the International Energy Conservation Code. Limited incandescent fixtures would be used for architectural purposes. Some limited exterior lighting may be metal halide. Exit and egress lighting would be by normal fixtures circuited to generator circuits. Controls would ensure that all exit and egress lighting is on in case of normal power failure.

A formal evaluation would determine the need for a lightning protection system. If, as expected, a lightning protection system is recommended, it would be a UL Master Labeled system with concealed down conductors. Air terminals and conductors would be copper or aluminum as required to coordinate with architectural considerations.

A new plumbing piping system and low consumption water saver fixtures with hands free sensor type faucets and flushing devices should be provided. The below slab sanitary piping system should be tested to determine if that portion of the existing sanitary system can be utilized.

The domestic water service may need to be replaced to increase the capacity once the new plumbing fixture requirements are known. A new dedicated water service would be required to provide wet pipe sprinkler protection throughout the building.

A comprehensive, high rise compatible, fire and smoke detection and alarm and voice evacuation system should be installed a coordinated with the sprinkler system. The system should be of fully electronic, addressable design. It should have remote reporting compatibility with a proprietary central station or the existing system in the Capitol.

For residential or hotel use, the following systems are proposed:

- A central plant chilled water system would be used for air conditioning. The cooling towers would be located on the roof of the building and the water-cooled chillers could be located on a new penthouse structure or in the basement. Supply and return chilled water pipes would be routed vertically from the basement to the penthouse. Individual constant volume vertical fan coil units would provide conditioned air to each apartment. OA for

ventilation would be provided at each mechanical room to meet the minimum ventilation requirements. Hot water for heating obtained from a new boiler in the basement.

Other systems would be similar to those noted above with the exception of:

- Power would be distributed to the floors and main mechanical equipment locations by aluminum power bus duct. Each floor would have at least one electrical closet consisting of the bus riser, a 480Y/277-volt panel serving lighting and mechanical equipment, a transformer and 208Y/120-volt panel for general-purpose electrical loads. Each dwelling unit would have an individual load center. Further evaluation will determine whether or not individual tenant metering will be desirable. This room would also serve miscellaneous electrical equipment including fire alarm terminal cabinets and security panels.
- Lighting in common areas would be high efficiency fluorescent fixtures with ratings and controls designed to meet or exceed the International Energy Conservation Code. Limited incandescent fixtures would be used for Architectural purposes. Some limited exterior lighting may be Metal Halide. Lighting in individual dwelling units would be a combination of fluorescent and incandescent, with provisions for additional table and floor-mounted lighting.

Use

Although built as a hotel, the 8<sup>th</sup> Street Office Building has served as Commonwealth office for over 30 years. There are inefficiencies for this use due to floor plate configuration, ceiling heights and structural grid. However, the current use shows that offices are feasible, particularly if combined with a general upgrade of building systems.

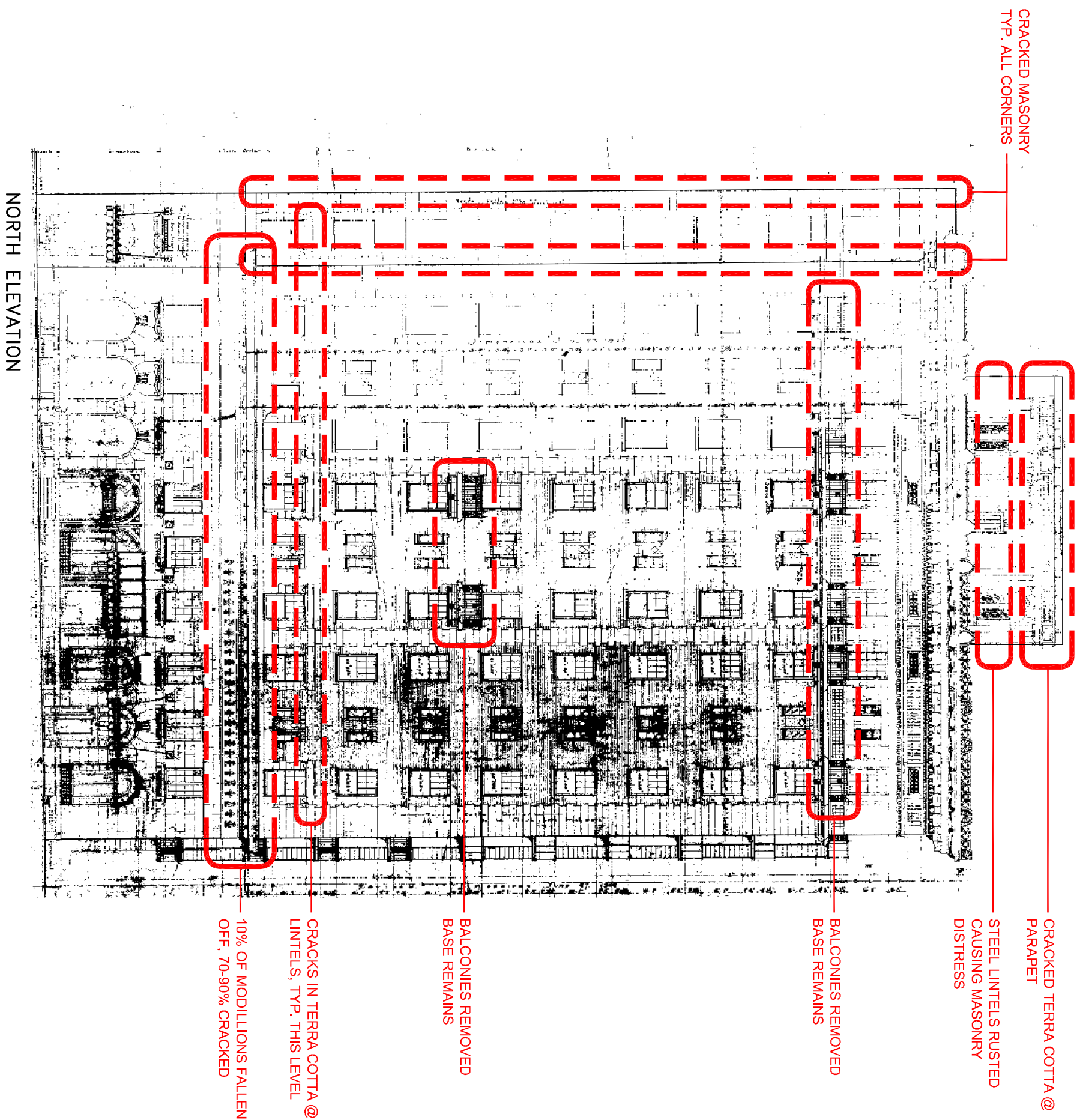
The building was built as a hotel and could be reused for that function. Hotel layouts have changed since its original construction. Larger public spaces, guest rooms and bathrooms are required. The current configuration could be renovated to fit current hotel and code requirements, particularly since most of the original guest room partitions and bathrooms have been removed. Similarly, the 8<sup>th</sup> Street Building could be adaptively reused for apartments. Reconfiguration similar to those required for a hotel could be made.

Parking

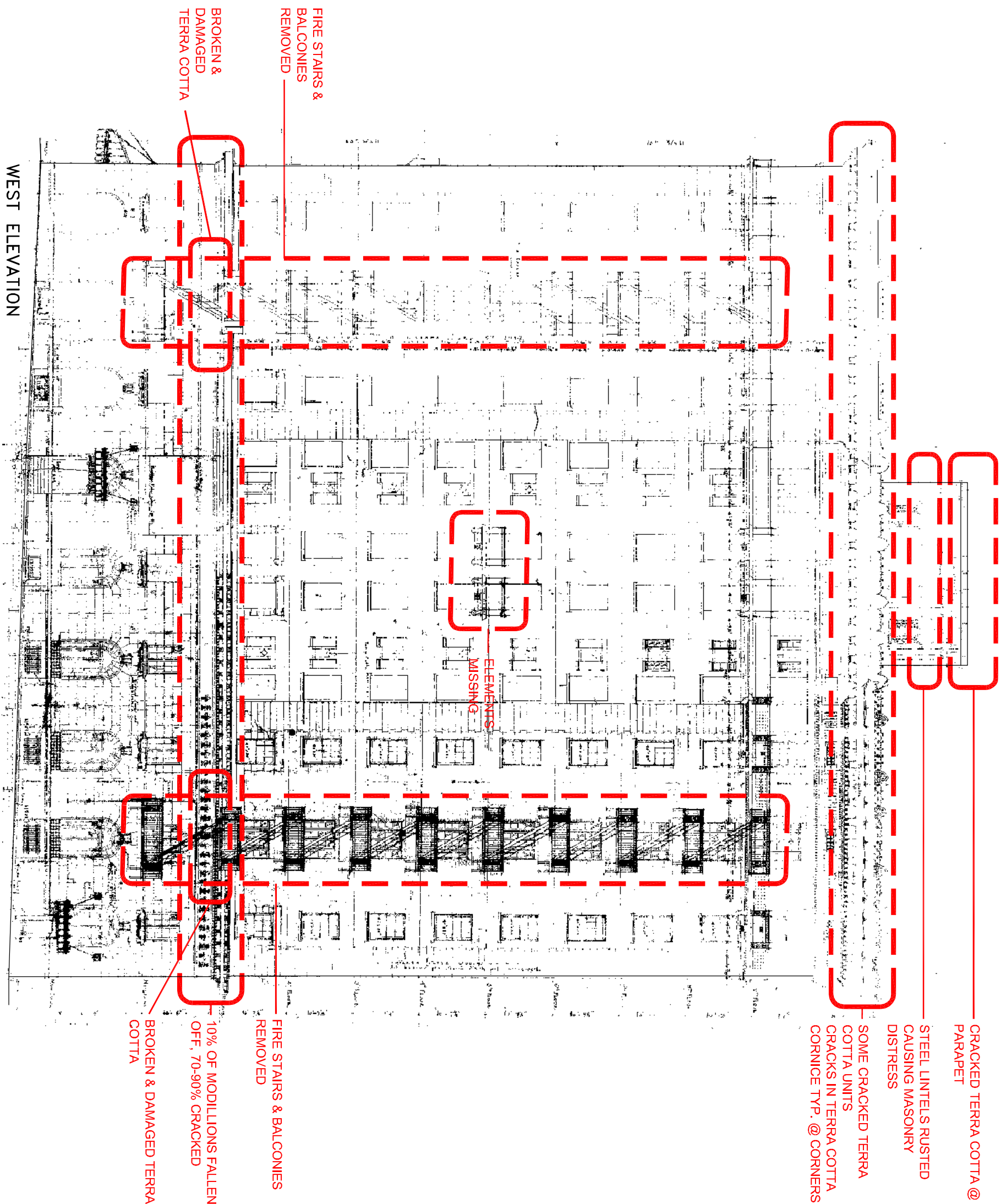
If occupied by State offices, parking for the 8<sup>th</sup> Street Building could be considered in tandem with that of the rest of the parking facilities in the Capitol Square complex. As previously discussed there are a number of approaches for addressing the issue. Construction of an adjacent new office building would provide the opportunity for shared use of any parking provided by the new building.

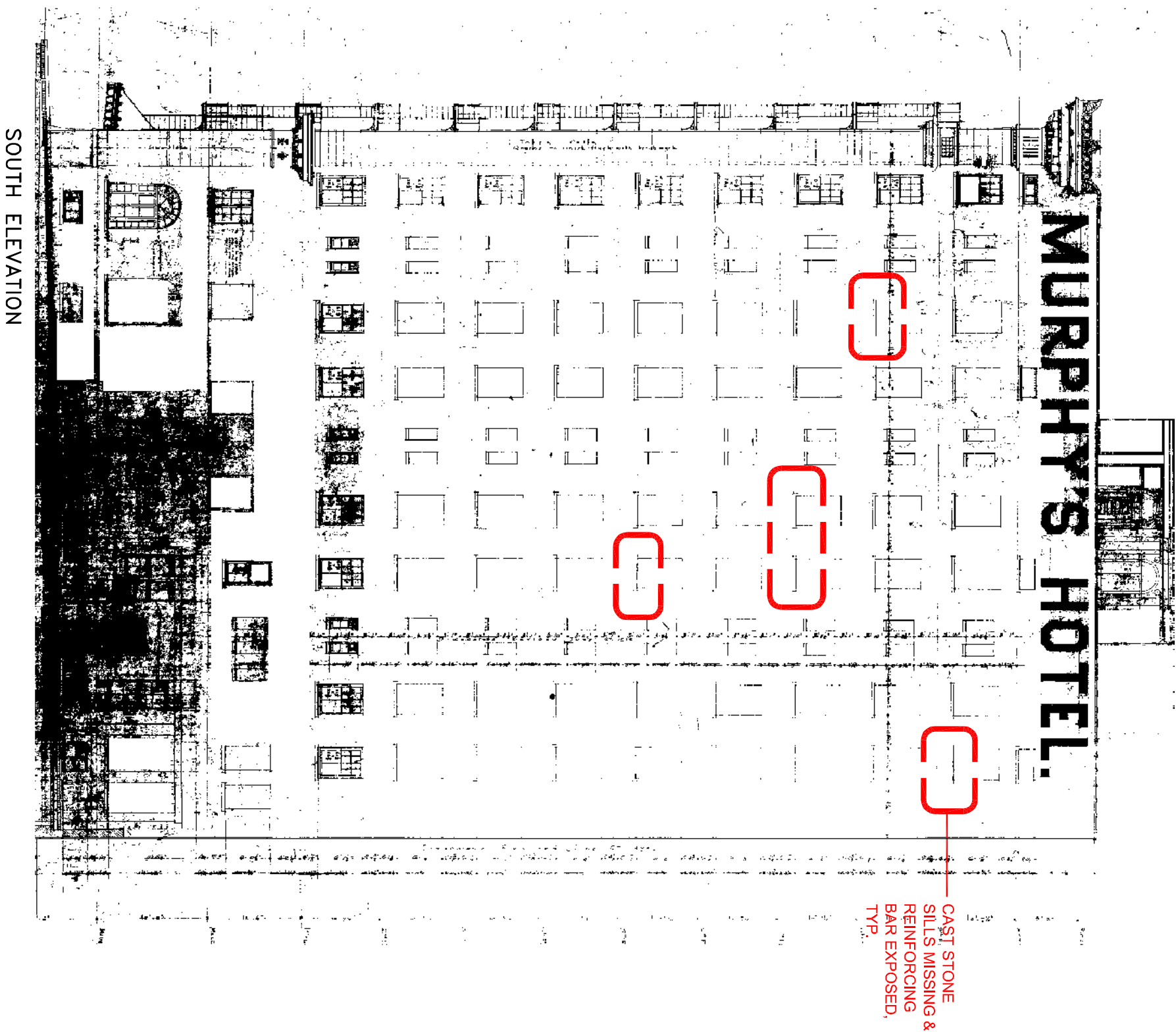
It the 8<sup>th</sup> Street Office Building is sold or a long-term lease arranged, private control of the building would make parking more of an issue – parking requirements would be under the regulation of the City of Richmond. Per the City of Richmond Zoning Ordinance, 70-130 parking spaces would be required if the building was used for apartments or hotel, respectively. 277

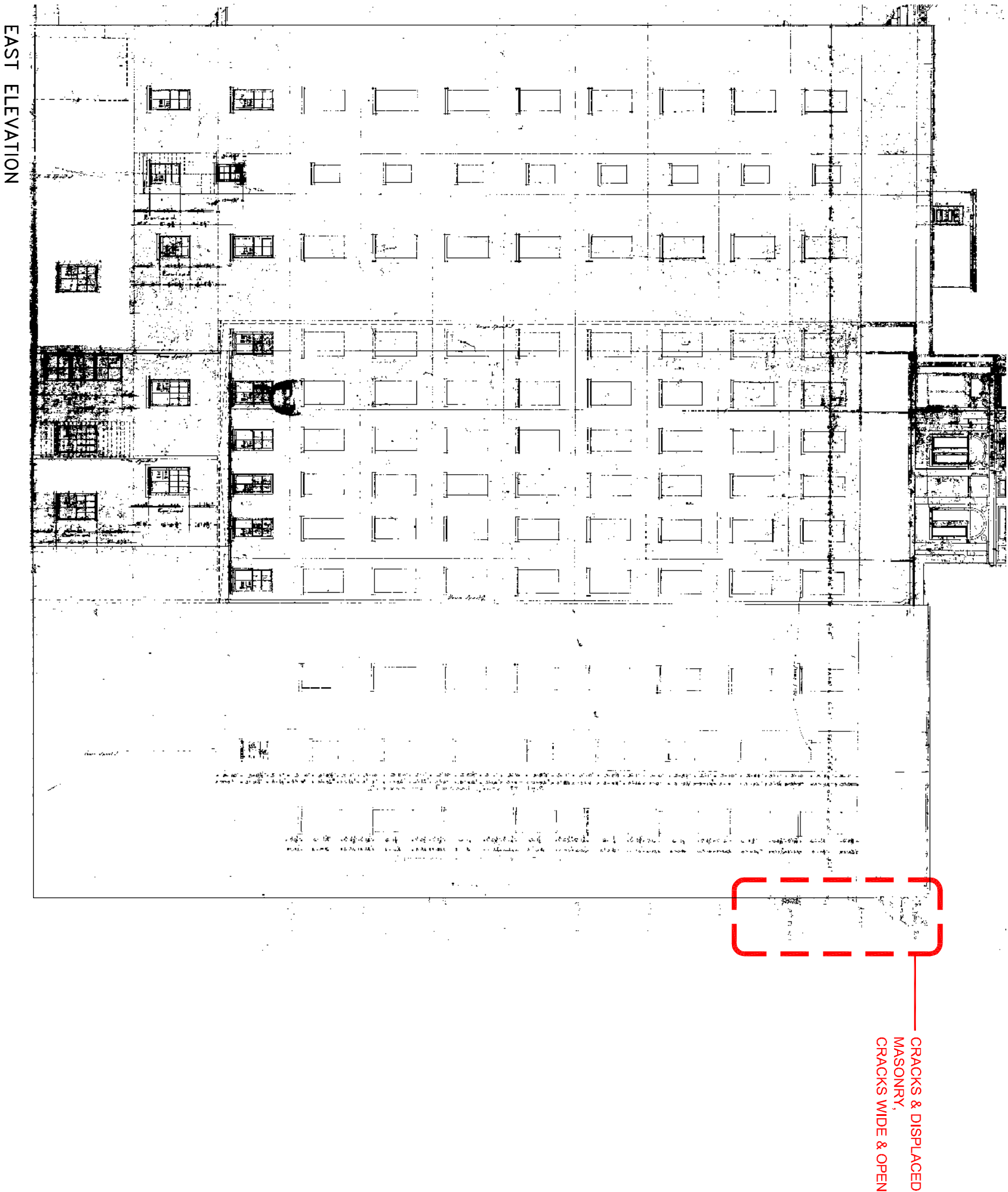
spaces would be required if used for offices. One approach would be to arrange long-term parking with one or more of the nearby private parking lots or ramps. It may also be possible to obtain a variance for the parking requirements to minimize the number of spaces required.



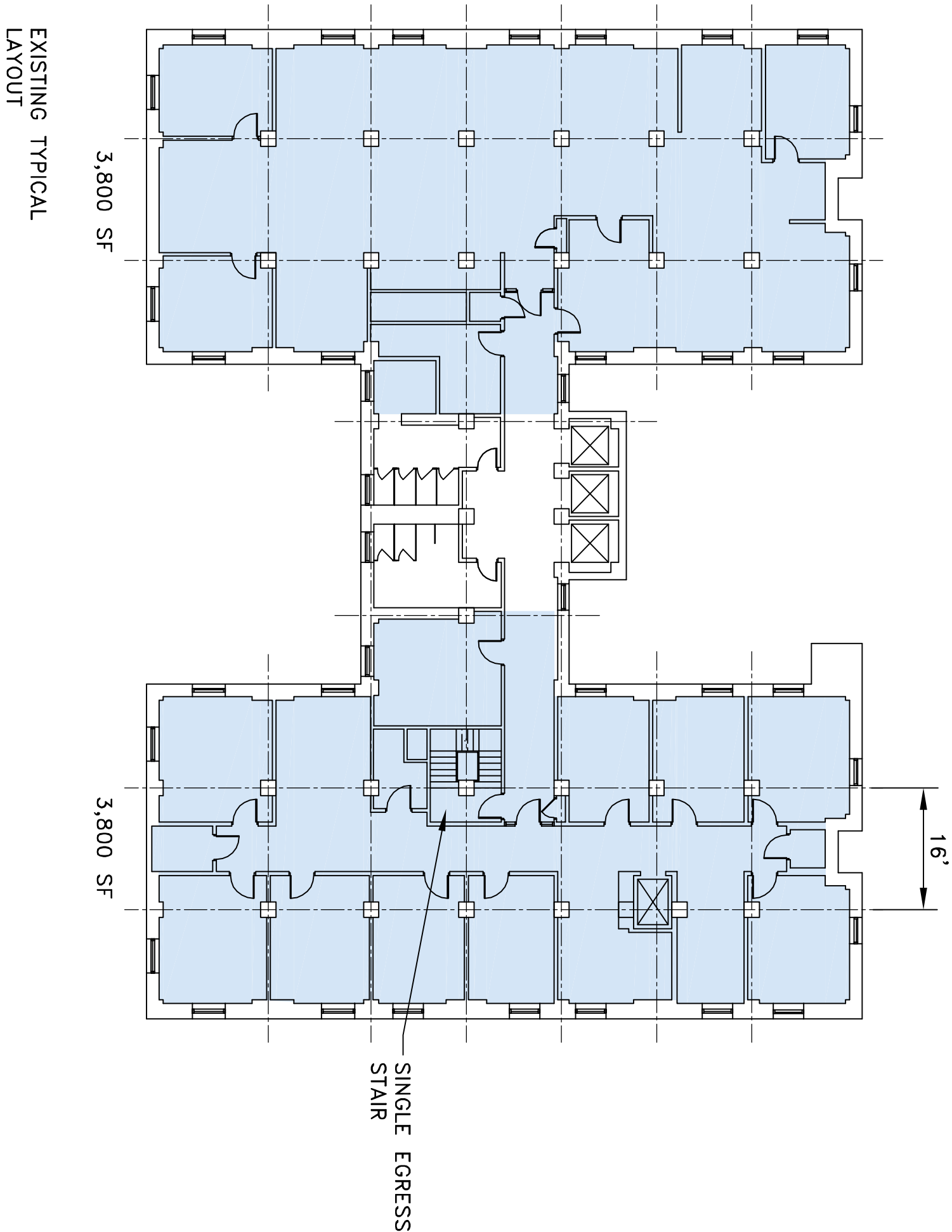




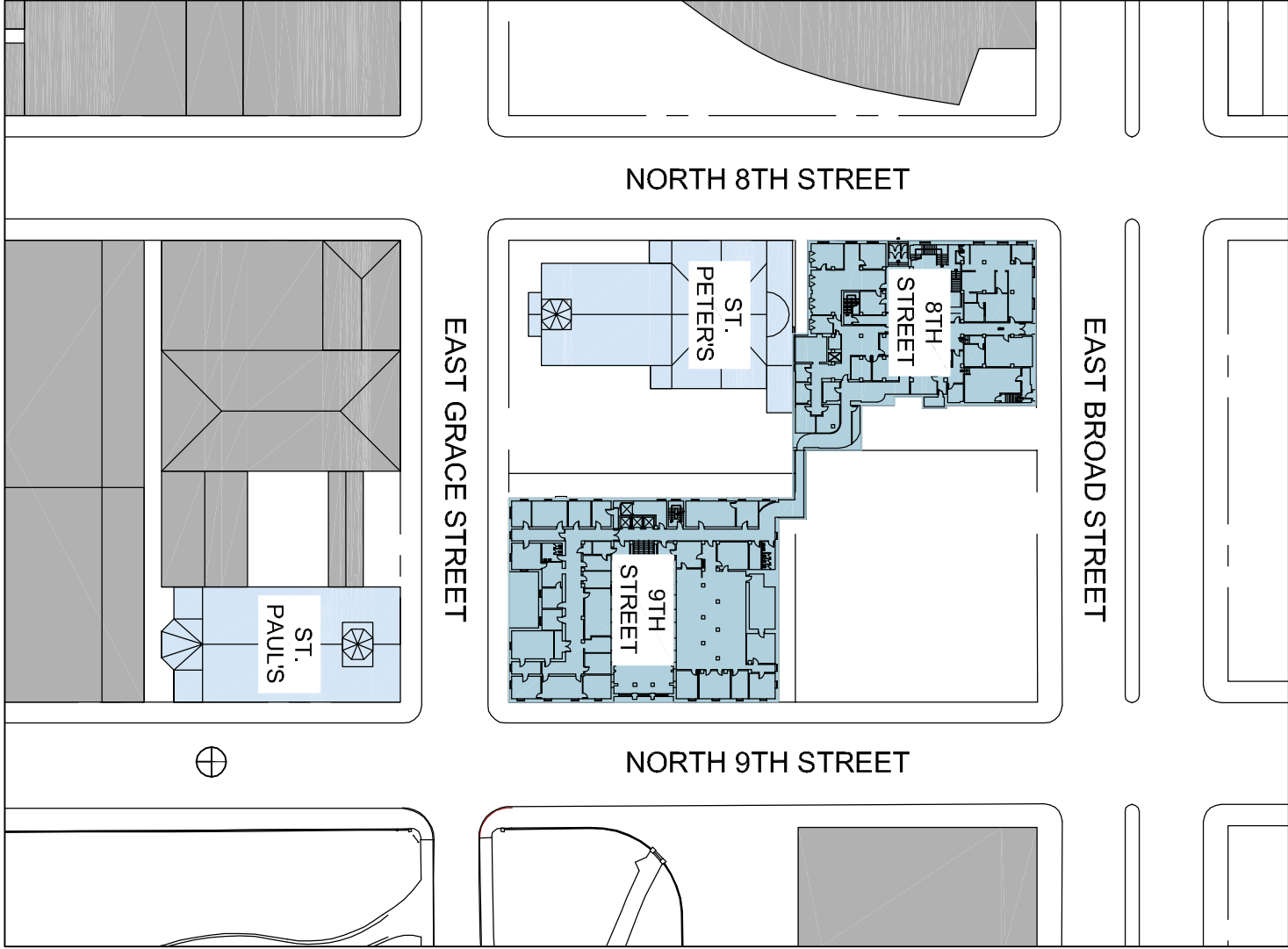












9<sup>TH</sup> STREET OFFICE BUILDING

The Ninth Street Office Building was originally known as the Hotel Richmond. The south portion of the building was built in 1904, and was composed of 8 floors, an attic, and a basement. In 1911, the building was more than doubled in size with the addition of the north wing [levels 1-10, basement and attic] as well as the 9<sup>th</sup> and 10<sup>th</sup> floor ballroom or Assembly Hall on the south side of the building. The building became an office building when purchased by the Commonwealth in the 1960s.



Photo 6.22: 9<sup>th</sup> Street Building, Entrance at 9<sup>th</sup> Street.

The building retains its original neoclassical ornament, much of which is rendered in contrasting masonry colors, with a granite and brick base and a copper cornice. The facades consist primarily of buff brick with contrasting brown/red brick window surrounds, quoins and a horizontal band at the 8<sup>th</sup> floor that originally crowned the building. Early drawings and photographs suggest that the base, which extends to the third floor, consisted of the brown/red brick with two courses of stone below the first floor windows. The base is currently painted white. When the two stories were added to the building in 1911, new materials were used including ornamental marble and a horizontal band of white terra cotta above the 8<sup>th</sup> floor and at the 10<sup>th</sup> floor window heads. A deep copper cornice with neoclassical detailing and large brackets was added at the 11<sup>th</sup> floor [Photos 6.22-6.24].

The interior is defined by the ornamental double-height lobby with grand marble stair and a stained glass laylight, a double-height ballroom, and the character and detail of the original hotel hallways.

Assessment of Existing Conditions

The condition survey was conducted on a two-day site visit on April 26 and 27, 2005 by Lisa Soderberg of Hillier, Susan Reynolds and John Matteo of Robert Silman Associates and Hugo Vera of Loring Consulting Engineers. The primary survey method of the building exterior was visual inspection from the ground. Upper portions of the walls were observed with binoculars and from the roofs. Suspicious areas were further investigated and exposed using scratch awls and other tools. The interior systems were observed from interior spaces without conducting probes and removing finishes etc. The following summary is based on the site observations.

Exterior Building Envelope

The 9<sup>th</sup> Street Building envelope appears to be in good condition, particularly for a 100 year old building. However, the building does exhibit localized areas of deterioration that are consistent with its age, and the specific type of construction. In general, the masonry walls exhibit the damaging affects of water infiltration through open and deteriorated joints and flaws in the masonry. There is some evidence of displaced and bulging masonry caused by the oxidation of ferrous metals within the walls. Masonry distress was also noted adjacent to failing components of the rainwater conduction system.



Photo 6.23: 9<sup>th</sup> Street Building, 9<sup>th</sup> Street Elevation.



Photo 6.24: 9<sup>th</sup> Street Building, Grace Street Elevation.





Photo 6.25: Openings cut below windows for air conditioning units have been a continual source of water infiltration causing distress in the adjacent masonry.



Photo 6.26: The exterior brick on the south elevation has been damaged by the removal of a metal fire escape and balconies.

Masonry

Open, Deteriorated Joints

There are areas of brick where there are open and deteriorated joints. Other areas have been repointed with inappropriate mortar which is harder than the adjacent masonry and could potentially cause damage to adjacent masonry units. At both the 8<sup>th</sup> and 9<sup>th</sup> Street buildings, we recommend that all open and deteriorated joints be raked out and repointed with an appropriate mortar. The new mortar should match the color, texture and tooling of the historic mortar. The new mortar must have greater vapor permeability and be softer [measured in compressive strength] than the brick, terra cotta or stone units adjacent to it. We also recommend the removal of inappropriate or hard mortar [measured in compressive strength] at locations where the mortar has caused damage [i.e. spalling] to the adjacent masonry units.

Brick

The exterior brick on the upper portion of the north elevation is experiencing efflorescence, indicating that there may be moisture in the wall assembly at this location.

The exterior brick on the south elevation has been damaged by the removal of a metal fire escape and balconies. All ferrous metal should be removed and all cracked and spalled brick should be replaced, matching the dimension, color and texture of the adjacent brick [Photo 6.26].

Similar to the 8<sup>th</sup> Street building, openings have been cut below the windows for air conditioning units [Photo 6.25]. These openings have been a continual source of water infiltration causing distress in the adjacent masonry including open joints and cracked brick. The best solution for the building is to remove the grilles entirely and to fill the openings with brick. If that is not possible, the joint between the grille and the masonry opening should be sealed.

We recommend that the paint at the base of the building be removed to restore the building to its original appearance.

Parapets

The brick parapets on the roof are in poor condition. Cracked and displaced units are evident at several locations, but the distress is most pronounced on the east elevation [Photos 6.30 and 6.31]. The Design Team recommends the disassembly of the brick parapet walls and the diagonal steel tie-rods [Photo 6.28]. All of the steel lintels that no longer support masonry openings should be discarded, and galvanized steel lintels should be installed where openings are required. The parapets should be reconstructed with appropriate control joints to mediate building movement.

Lower parapets have been covered with a non-breathable coating which is trapping moisture and contributing to the deterioration of the lower parapet [Photo 6.27]. We recommend that the coating be removed and that the parapet be rebuilt as necessary. We also recommend the installation of lead joint covers at all copings.





Photo 6.27: The lower parapet wall has been covered with a non-breathable coating, which is trapping moisture, contributing to the masonry deterioration.



Photo 6.28: Diagonal steel tie-rods have been installed at the upper parapet. Note patched crack on interior of parapet wall.



Photo 6.29: The majority of the cast stone sills on the Elevation facing Broad Street have cracked and spalled.



Photos 6.30 and 6.31: Cracked, spalled and displaced brick units are evident throughout the upper parapet, but the distress is most pronounced on the east elevation.





Photo 6.32: Deteriorated concrete encased steel edge beam on the north elevation.



Photo 6.33: Detail of spalled beam on the north elevation.

## Other Masonry Conditions

### Cast Stone Sills

Many of the cast stone sills exhibit distress. On the elevation facing Broad Street, the majority of the concrete sills have cracked and spalled, exposing the reinforcing bars [Photo 6.29]. Water has infiltrated the sills and caused oxide jacking of the reinforcing bars, which has cracked the cast stone. Cracked or spalled sills should be replaced. Because the sills would be more durable if the steel could be eliminated, consideration might be given to replacing the sills with stone.

### Lintels

Previously existing window openings in the west façade were spanned with steel lintels. The windows have since been infilled with brick, but the steel lintels have not been removed. The expansive forces of the oxide jacking of the corroded steel have caused the displacement of brick units around the lintels. If there is an intention to replace the windows in a future renovation/restoration, the Design Team recommends partial disassembly of the masonry, followed by the replacement of the steel lintels with a corrosion-resistant assembly. If there is no intention to restore the windows, the Design Team recommends removing the steel lintels altogether and subsequently refilling the opening with brick masonry.

### Miscellaneous Steel

The concrete-encased steel edge beam on the north elevation is spalling [Photos 6.32 and 6.33]. Loose concrete shall be removed and the steel beam shall be inspected at close range for corrosion or other deterioration. We recommend that all loose concrete be removed and the steel should be cleaned to bare metal and painted with a rust inhibitive paint. The concrete should be patched.

### Sidewalk Vaults

The 9<sup>th</sup> Street Office Building is similar to the 8<sup>th</sup> Street Office Building in that there are sidewalk vaults below grade and adjacent to the basement level. Like the sidewalk vaults adjacent to the 8<sup>th</sup> Street Building, there is active water infiltration in the sidewalk vaults adjacent to the 9<sup>th</sup> Street Building. Steel beams in this area are suffering from significant corrosion and rustjacking, and the concrete slab is experiencing spalling, exposing corroded reinforcement [a welded wire mesh]. Pressure treated wood posts and joists have been erected as temporary shoring in these areas. Permanent repairs in the sidewalk vault area will include arresting the water infiltration, providing appropriate waterproofing and reinforcing structural members.

### Windows

The original windows were typically one-over-one wood double-hung windows on the primary elevations and two-over-two wood double-hung windows on the rear or secondary elevations. Some of the original windows remain on the rear facades [i.e. the South Elevation]. Most of the original windows were replaced in the 1970s with one-over-one double-hung aluminum windows. All of these windows are at the end of their useful life.



Photo 6.34: Copper cornice and gutter below roof level.



Photos 6.35 and 6.36: Decorative plaster in original double-height Assembly Room remains intact. There is plaster damage associated with the installation of HVAC equipment and water infiltration from a leaking gutter system directly above. The decorative plaster could potentially be restored.

We recommend that all of the windows be replaced with new high quality custom-made aluminum clad wood windows and frames to match the profile and dimension of the original windows. The new windows should be one-over-one double-hung windows. All aluminum clad wood windows would have a high performance factory-applied finish with a warranty of 20-30 years and an assumed effective life span of +/- 50 years.

If federal funds or tax credits are being considered for use in the rehabilitation of the building, it will be necessary to meet the "Secretary of the Interior's Standards for Rehabilitation." The "Standards for Rehabilitation" considers the aluminum clad wood window a suitable replacement for historic double-hung wood windows. The Secretary of the Interior's Standards state that "if using the same kind of material is not technically or economically feasible when replacing windows, then a compatible substitute material may be considered." The Standards recognize that for certain types of large buildings, particularly high-rises, aluminum windows may be a suitable replacement for historic wood sash provided the installation of wood replacement sash is not practical and the design detail of the historic windows can be matched exactly.

### Roofing and Rainwater Conduction System

The existing roof was installed in 2004. The roof over the main lobby appears to be at the end of its useful life and should be replaced.

A few conditions were noted, which indicate that the rainwater conduction system has failed in certain areas. Cracked terra cotta units were observed directly adjacent to downspouts on the south side of the building. The cracked terra cotta may have been caused by continual water infiltration from the failed downspout over a normal freeze thaw cycle. Significant masonry deterioration and mortar loss was noted in the basement at the junction of the downspout and boot indicating that the water infiltration is active and leaches water into the wall.

We recommend that the entire rainwater conduction system be evaluated and investigated further to ensure that all components are operating and are watertight, and that the system is sized properly. Our limited observations indicated that at least some of the components will have to be replaced entirely.

### Copper Cornice

Some holes were noted at the corners of the copper cornice [Photo 6.34]. The cornice is lined with an EPDM liner that typically has a life span of only 10-15 years. Any openings or holes in the cornice and brackets should be repaired.

There is evidence of plaster damage in the Assembly Room directly below the gutter, indicating that the gutter has been a source of water infiltration in the past.

### Building Interior

Although several areas of the building remain much as originally constructed, many of the interior spaces were modified



during the conversion to offices. The double-height lobby remains, with its grand stair, chandeliers and laylights [Photo 6.37]. One suite of offices on the second floor retains much of its original architectural detail. The assembly hall on the 9th floor remains, although partitions and dropped ceilings have been built in this double-height space [Photos 6.35 and 6.36]. The corridors retain much of their original architectural character, although the spaces behind have been altered by removal of former guest bathrooms and partitions to create office space.

The building has only one egress stair, which does not meet current Code requirements in either configuration or count. Asbestos-containing materials have been identified in the building and should be removed before any renovation project is undertaken. If renovated, all life safety elements would require replacement or upgrading.

**Structural System**

The Ninth Street Office Building presents conflicting information with respect to its structural system. In general, the building structure consists of load-bearing masonry walls and isolated steel or concrete beams supporting one-way slab construction above the 4th floor level. The floors below present fewer bearings walls, with steel and concrete beams and girders replacing some walls to support the one-way slab system. Refer to Drawings 4 through 6 on page B-2 of Appendix B for typical floor construction.

The 10-story building was constructed in two main phases of work. The original south portion was built in 1904. In 1911, John Kevan Peebles Architects designed a 9th and 10th floor addition over the original building with a full 10-story addition to the north, which more than doubled the original size of the building.

**Building Systems**

The building is currently served by a combination of several split systems and self-contained packaged air conditioning units. The split system air handlers serve the open public areas, corridors and office spaces in the 1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup> floors. All individual spaces in the upper floors are served by wall mounted packaged air conditioning units w/electric heat. A packaged rooftop unit serves the main lobby. Gas-fueled steam boilers in the basement provide the steam for heating the perimeter radiators in the main lobby, the cafeteria and to produce hot water through a steam converter. The hot water is distributed to the 8<sup>th</sup> Street Building. No hot water is used in the 9<sup>th</sup> Street Building.

The electrical service to this building and all electrical equipment and wiring are approaching the end of their usable life. The existing mechanical, electrical, plumbing and life safety systems in the 9<sup>th</sup> Street Office Building are of a wide variety of ages, condition and Code compliance. Any significant reuse of the building should include a complete system replacement.



Photo 6.37: Architecturally-significant interior spaces remain intact. View of double-height entrance lobby.

### Floor Plate and Sectional Analysis

The 9<sup>th</sup> Street Office Building consists of 10 primary floors, one floor with low ceiling height, plus a cellar and penthouse. The typical floor-to-floor dimension on the upper floors is 9'-6". The first floor has a floor plate of 17,000 square feet. The upper floors contain a floor plate of approximately 14,000 square feet, although the floors 10 and 11 have less due to the volume of the double-height ballroom on the 9<sup>th</sup> floor and roof trusses above. The floor plates are arranged in a "U" formation, with vertical circulation and services located in the center. The interior building structure consists of a pair of load bearing masonry walls which form the corridor on each floor. The clear span to the exterior walls varies from 12'-0" to 16'-0". The low floor-to-floor height makes the integration of modern HVAC systems difficult. Figure 6.12 and 13.

### Below Grade Construction Limitation

For the same reasons as discussed with the 8<sup>th</sup> Street Office Building, there is a concern about the impact of groundwater on below-grade construction. Groundwater issues can be overcome by selected construction methods, but it can result in a significant increase in construction costs. It would be possible to add additional levels beneath the 9<sup>th</sup> Street Building, although the cost of underpinning the existing foundations would make this option unacceptably expensive. Similarly, any below grade construction on the existing parking lot site may require the underpinning of the 9<sup>th</sup> Street foundations, should the building remain.

### Impact on Adjacent Structures

Also similar to the 8<sup>th</sup> Street Building would be the concern over the impact of vibrations from demolition and construction on the neighboring churches. This concern must be addressed when reviewing the constructability of any proposed option.

### REUSE OPTIONS

The 9<sup>th</sup> Street Office building could be adaptively reused for any number of functions, most notably offices, hotel and apartments. Use of the first floor of the 9<sup>th</sup> Street Building for retail may be considered inappropriate given its direct relationship to the Square. Each use has impacts on the building when adapting to existing conditions.

### Preservation of the Existing Structure: Limitations and Opportunities

Due to its relatively narrow structural spans, the floor plate of the 9<sup>th</sup> Street building works best for hotel or residential functions, where wide, clear spans are not required. The building is less successful when used for office functions for this same reason. The relatively narrow spaces limit flexibility in the office planning that is the norm for today's standard configuration. New office construction typically has clear spans of 20-30 feet. The existing partitions perpendicular to the corridor walls could be removed to create open areas, as they are not load bearing. It would be possible to increase the open floor area on each floor by replacing the interior load bearing masonry walls with columns in specific areas, although the cost of this would be

significant and the redistribution of uniform loads into concentrated areas should be carefully considered.

The most significant challenge is meeting current Code requirements for egress. Regardless of the final use, two additional egress stairs would be required, as well as the reconstruction of the existing stair to meet Code. The exact location of the stairs would need to be coordinated with the final use for the building.

The typical floor-to-floor dimension is 9'-6". Although significantly less than present -day standards, by careful integration of building systems, the building could continue to serve as office space, while meeting current Code requirements. The floor-to-floor dimension is ideal for adaptive reuse for residential or hotel.

The lobby of the 9<sup>th</sup> Street Office Building is of architectural and historical significance. This grand space could be retained within the construction of a new building as a mean of mitigating the demolition of the remainder of the building.

The former double-height ballroom on the ninth floor has been filled with offices over the years, although the space remains intact above a dropped ceiling. Regardless of function, this space, if restored to its original configuration, could serve important functions: meeting rooms, ballroom, activity room, etc. If it is determined that the space would be better used in other configurations, a structural analysis could be performed that would be able to determine whether a floor could be added in the space to increase useable floor area on the tenth floor.

### Floor Loading

The team reviewed the structural drawings from the 1911 work and found several direct conflicts between what is indicated on the drawings in comparison to what is observed on site.

The most important of these conflicts, with respect to planning for future use of the Ninth Street Office Building, is the apparent difference in floor construction. The 1911 drawings indicate the use of a 7" flat one-way reinforced concrete slab. Though much of the floor construction is currently covered with finishes, we were able to clearly observe areas in the 1911 work where a terra cotta tile and one-way concrete joist system was used in place of the flat slab indicated on the drawings. Such conflicts in floor system were observed at three distinct locations:

- The construction of the roof above the longspan trusses over the south ballroom (part of the 1911 floor additions over the 1904 building).
- The 9th Floor infill at the south side of the 1904 building shows steel girder and flat slab on the 1911 drawings, however observation from below presents a clear pattern of tile and joists spanning between filler beams.
- From within the basement of the 1911 addition, we observed several areas of tile and concrete joist floor construction. These areas are called out as reinforced concrete flat slab on the design drawings.

It is interesting to note that within the original specification by John Kevan Peebles Architects for the Eighth Street Office Building (which was designed to be "delivered to the contractor by June 1, 1912") it states with respect to the floor structure design:



“Floors. – Floors are figured to carry the loads stated above [referencing tabulated dead and live loads], with a factor of safety of four, and the sizes, heretofore stated, are to be checked by this contractor before he signs the contract, and, if necessary, exceptions noted with the Architect. The signing of the contract without notice of exceptions, is assumption of complete responsibility.” P. 23.

It is clear that with this statement, there is a mechanism in the construction process for the contractor to review, verify, and modify the structural design of the Architect if required. One hypothesis is that this significant modification to the floor slab system was made during this procurement and preconstruction phase.

**Live Load Capacities**

Given that there are no structural drawings for the 1904 portion of the building and that the floor system of the 1911 work has apparently been constructed with a different system than that which is indicated on the design drawings, we are not able to make a definitive statement of floor live load capacities until a probe investigation is undertaken. The probe investigation would serve to verify the floor construction as well as the amount of dead load in terms of floor fills and finishes. The study would also serve to evaluate the steel and concrete framing, confirming its correspondence to the design drawings (it is unknown if just the one-way slab system was changed). Non-destructive investigation techniques may also serve to provide general corroboration of probe findings in more sensitive areas.

With respect to the current understanding of live load capacity it is important to address the conclusions of a recent engineering report produced by Haynes Whaley Associates, Structural Engineers, dated October 29, 2004. In this report the live load capacities of the 1904 construction (Area A) and the 1911 construction (Area B) are referenced as being 30 psf and 50 psf respectively. The source of this information is from drawing S-1 dated 3/30/81 by Joseph Ladd & Architects. When reviewing this drawing, it is interesting to note that the live load capacities stated are, in turn, referenced parenthetically below as coming from a source at the Division of Engineering, Commonwealth of Virginia. As we have not been able to trace these values back to an original source document or to a definitive investigation, we are unclear whether or not these were just general guidelines provided at this time, which were subsequently interpreted as actual capacities, or if these are based upon previously available documentation.

The 2004 engineering report also describes the existing floor system of Area A as tile and one-way joist, while that of Area B being 7” one-way slab. As noted above, we believe, based upon site observations, that the flat slab system was likely substituted with tile and joist similar to that of Area A. The report finds Area B to ultimately have an acceptable live load capacity for new office use, based upon an extrapolation from the stated 50 psf and the transition from Allowable Stress Design to Ultimate Strength Design. Our calculation of existing slab capacity based upon the maximum one-way span, using historic material properties (similar to those referenced in the 2004 report), finds a significantly lower live load capacity. However, the slab investigated does not even meet some basic span to thickness ratios, so we conclude that this may have been part of the justification for the change in floor system. Selected beams on the other do appear to present higher live load capacities, on the order of 60 psf, however these calculations are based upon the given 7” slab and estimates of dead load finishes.

Though, as noted above, a definitive value for live load capacity does not appear to be attainable without a probe investigation, the use of historic design tables for the tile and one-way joist system can shed some light on possible capacities for the apparent as-built system. The Joseph Ladd drawings describe the existing tile and joist floor system as being built from a 6" tile with ribs at 16" on center. Using the historic design table's thinnest top slab (1 ½"), the one-way system is tabulated as being able to support a 99 psf Maximum Safe Load for the longest span of 15 feet. If we assume a similar level of finishes and fills as are documented at the Eighth Street Office Building (weighing 35 psf), we are left with a live load capacity equal to 64 psf. Similar to the discussion for Eighth Street, this value is close to our required value of 70 psf for new office use.

The proposed method for strengthening the tile and one-way joist system, as illustrated in Detail 1 of the 2004 report, is a viable approach, although the means of anchorage shown likely conflicts with the existing single bar reinforcement in the concrete rib. If reinforcement is determined necessary, we recommend a similar approach using epoxy-bonded carbon fiber laminates. The advantage of carbon fiber is its high tensile capacity and ease of installation. Although the carbon fiber material is likely more expensive than the required steel, the ease of installation and getting the materials where needed on site may more than compensate for the cost difference. Like the steel reinforcement, the bottom surface carbon fiber would need to be fireproofed.

**Lateral Load Resistance**

Unlike the Eighth Street Office Building, the perimeter walls of the Ninth Street Office Building are load-bearing masonry, without steel columns or spandrel beams integrated into the assembly. Lateral forces such as wind or earthquake were assumed to be adequately resisted by the perimeter masonry bearing walls in combination with interior bearing walls. If the extent of renovations leads to a requirement to upgrade this building to meet current code, it is reasonable to expect a requirement for some structural modifications.

**Structural Changes: Additions and Removals – Limitations and Opportunities**

The tile and one-way concrete joist slabs provide a relatively compact system that can be penetrated or resupported for new openings in a variety of ways. Small penetrations can be located between ribs with little structural implication. Generally, if ceiling heights permit, larger openings in the floor slab can be supported on new steel beams set below the slab around the perimeter of the new opening. The new steel would frame into existing bearing walls or other structural members.

Widening existing elevators or introducing new shafts will require the following structural items:

- New reinforced concrete elevator pit with mat foundation. Care will need to be taken regarding the relative elevations of the new pit foundation to the existing column or wall footings. Depending on the depths of existing foundations and the proximity of the new pit, localized underpinning may be required.
- New steel floor framing would be introduced at each penetrated floor level. When new beams frame into existing at such larger openings, reinforcement of existing members may be required. Consideration should be given to the

effectiveness of using the new shaft walls as bearing walls for the penetrated slab. If so, the wall would likely be CMU.

- The elevator shaft could be constructed of CMU or shaft wall (if non-load-bearing), however accommodation will need to be made for elevator rail support at regular intervals along the shaft height.
- If the elevator penetrates the existing roof, a new bulkhead construction will be required.

**Structural Reinforcement**

Slabs can be reinforced either by introducing new tensile material such as carbon fiber or steel plate along the underside. Alternately, spans can be shortened by introducing intermediate steel members. However, given the relatively long spans, a system of new steel set below the slab may be overly limiting to floor to ceiling heights.

**Light Court Infill**

An option to increase usable floor area would be to construct a new floor plate within the light court on the east facade, creating a connection between the two wings (Figure 6.14). This can be achieved in a variety of ways, however careful consideration will need to be made of the total loads being taken along the lines of the existing light court perimeter walls. It would be possible to remove load-bearing masonry along this perimeter and to widen existing window openings to create a greater connection between the new and adjoining existing space and would provide the benefit of removing significant dead load along the lines which will need to be supporting new load from the infill. Given the history the south portion already having two additional stories, with longspan trusses spanning over the ballroom and bearing on the south light court wall, load evaluations should certainly be carried down to foundation level, with careful structural and geotechnical consideration of potential settlement.

This concept would impact the 9<sup>th</sup> Street primary facade of the building. If historic rehabilitation tax credits are to be utilized, careful consideration to the design would need to be given. The design would need to be reviewed and approved by the Department of Historic Resources.

**Building Systems**

Two options exist for new HVAC systems for the 9<sup>th</sup> Street Building as offices:

Alternative 1 - Central plant chilled water system w/cold air distribution. The cooling towers would be located on the roof of the building and water-cooled chillers could be located on a new penthouse structure or in the basement. Supply and return low temperature (38 F) chilled water pipes would be routed vertically on both sides of the main corridor from the basement to the penthouse. Several variable volume air handling units (AHU's) would be installed at each level to provide cold air to perimeter fan powered terminal units. These units will include a heating element and would be installed in a vertical position at each window. The supply air would be distributed in the level below and would penetrate the slab to the appropriate terminal unit. This alternative would minimize horizontal ductwork distribution throughout the floor and reduce the size of the mechanical equipment. Outside air (OA) for ventilation would be provided at each mechanical room to meet the minimum



ventilation requirements. CO2 sensors would control quality of outside air to meet minimum ventilation requirements.

Alternative 2 – Conventional central plant chilled water system. The cooling towers would be located on the roof of the building and the water-cooled chillers could be located on a new penthouse structure or in the basement. Supply and return chilled water pipes would be routed vertically on both sides of the main corridor from the basement to the penthouse. Several variable volume air handling units (AHU's) would be installed at each level to provide conditioned air to the open office areas at each side of the main corridor. The units would include a heating element. Outside air (OA) for ventilation would be provided at each mechanical room to meet the minimum ventilation requirements. CO2 sensors would control quality of outside air to meet minimum ventilation requirements. The units will include a heating element.

Due to the 9'-6" ceiling height on upper floors, the integration of ductwork must be carefully considered. Ceilings will have to be lowered in areas to accommodate the ductwork. This is particularly true due to the loadbearing masonry corridor walls which will require numerous penetrations for new systems. Consideration should be given to running ductwork in soffits along the office side of the corridor walls in order minimize there penetrations. Toilet and general exhaust would be routed to the roof and discharged through a roof opening to be architecturally coordinated.

A complete new electrical system would be required. The service would be 480Y/277-volts, 3-phase, 4-wire, 2500-ampere, served from a Dominion Power vault mounted transformer. The main service feeder would be copper conductors in a duct bank. The service equipment would consist of a main bolted pressure switch, main surge suppression, provisions for Dominion Power metering, provisions for retail metering, customer metering, and feeder circuit breakers.

Power would be distributed to the floors and main mechanical equipment locations by aluminum power bus duct. Each floor would have at least one electrical closet consisting of the bus riser, a 480Y/277-volt panel serving lighting and mechanical equipment, a transformer and 208Y/120-volt panel for general purpose electrical loads, a k13 transformer and isolated ground 208Y/120-volt panel for sensitive loads, and a ground riser and ground bar. This room would also serve miscellaneous electrical equipment including fire alarm terminal cabinets and security panels.

Major mechanical equipment locations shall include either distribution panels and combination starters and VFDs, or Type 2, class B motor control centers. Distribution to major mechanical equipment would be copper conductors in EMT, with flexible conduit for the final connection. Branch circuit wiring, where concealed, shall be copper conductors in type MC cables.

Emergency power would be from a self-contained, diesel engine generator with associated distribution and transfer switches. This would power all required life safety systems and one elevator. The size is estimated to be 200 kW.

Lighting would be high efficiency fluorescent fixtures with ratings and controls designed to meet or exceed the International Energy Conservation Code. Limited incandescent fixtures would be used for Architectural purposes. Some limited exterior lighting may be Metal Halide. Exit and egress lighting would be by normal fixtures circuited to generator circuits. Controls would ensure that all exit and egress lighting is on in case of normal power failure.

A formal evaluation would determine the need for a lightning protection system. If, as expected, a lightning protection system is recommended, it would be a UL Master Labeled system with concealed down conductors. Air terminals and conductors would be copper or aluminum as required to coordinate with Architectural considerations.

A new plumbing piping systems and low consumption water saver fixtures with hands free sensor type faucets and flushing devices should be provided. The below slab sanitary piping system should be tested to determine if that portion of the existing sanitary system can be utilized. The domestic water service may need to be replaced to increase the capacity once the new plumbing fixture requirements are known. A new dedicated water service would be required to provide wet pipe sprinkler protection throughout the building.

A comprehensive, high rise compatible, fire and smoke detection and alarm and voice evacuation system should be installed a coordinated with the sprinkler system. The system should be of fully electronic, addressable design. It should have remote reporting compatibility with a proprietary central station or the existing system in the Capitol.

For residential or hotel use, the following systems are proposed:

A central plant chilled water system would be used for air conditioning. The cooling towers would be located on the roof of the building and the water-cooled chillers could be located on a new penthouse structure or in the basement. Supply and return chilled water pipes would be routed vertically from the basement to the penthouse. Individual constant volume vertical fan coil units would provide conditioned air to each apartment. Outside air for ventilation would be provided at each mechanical room to meet the minimum ventilation requirements. Hot water for heating obtained from a new boiler in the basement.

Other systems would be similar to those noted above with the exception of:

Power would be distributed to the floors and main mechanical equipment locations by aluminum power bus duct. Each floor would have at least one electrical closet consisting of the bus riser, a 480Y/277-volt panel serving lighting and mechanical equipment, a transformer and 208Y/120-volt panel for general-purpose electrical loads. Each dwelling unit would have an individual load center. Further evaluation would determine whether or not individual tenant metering would be desirable. This room would also serve miscellaneous electrical equipment including fire alarm terminal cabinets and security panels.

Lighting in common areas would be high efficiency fluorescent fixtures with ratings and controls designed to meet or exceed the International Energy Conservation Code. Limited incandescent fixtures would be used for Architectural purposes. Some limited exterior lighting may be Metal Halide. Lighting in individual dwelling units would be a combination of fluorescent and incandescent, with provisions for additional table and floor-mounted lighting.

**Use**

Although built as a hotel, the 9<sup>th</sup> Street Office Building has served as Commonwealth office for over 30 years. There are

inefficiencies for this use due to floor plate configuration and structural grid. However, the current use shows that offices are feasible, particularly if combined with a general upgrade of building systems.

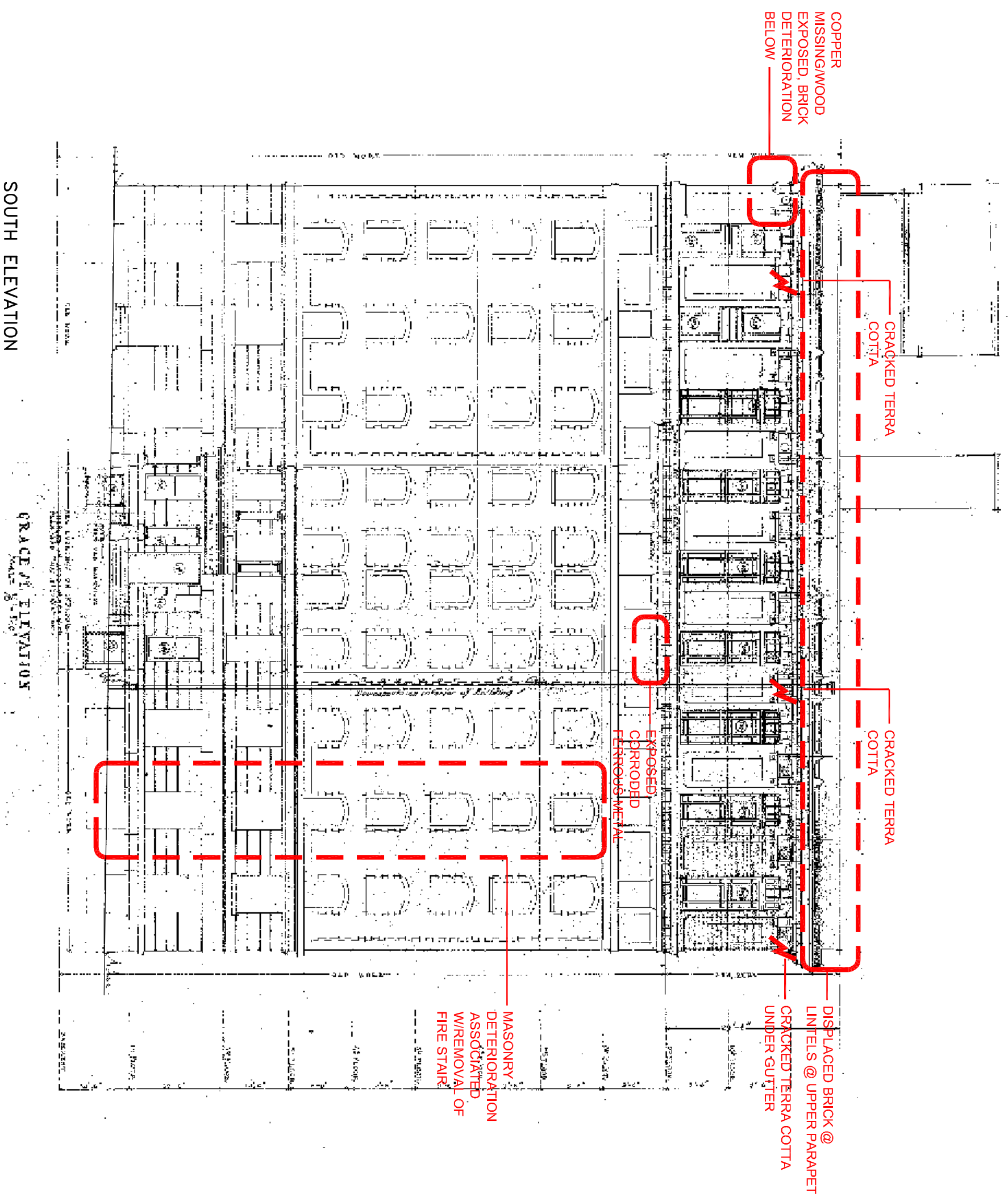
The building was built as a hotel and could be reused for that function. Hotel layouts have changed since its original construction. Larger public spaces, guest rooms and bathrooms are required. The current configuration could be renovated to fit current hotel and code requirements, particularly since most of the original guest room partitions and bathrooms have been removed.

Similarly, the 9<sup>th</sup> Street Building could be adaptively reused for apartments. Reconfiguration similar to those required for a hotel could be made. The location is surrounded by generally institutional buildings and lacks amenities normally associated with apartment living. Areas to the south are actively being converted to residential. Given time, this location may also become desirable for residential use. However, the appropriateness of residential development directly facing Capitol Square can be questioned. Similarly for retail.

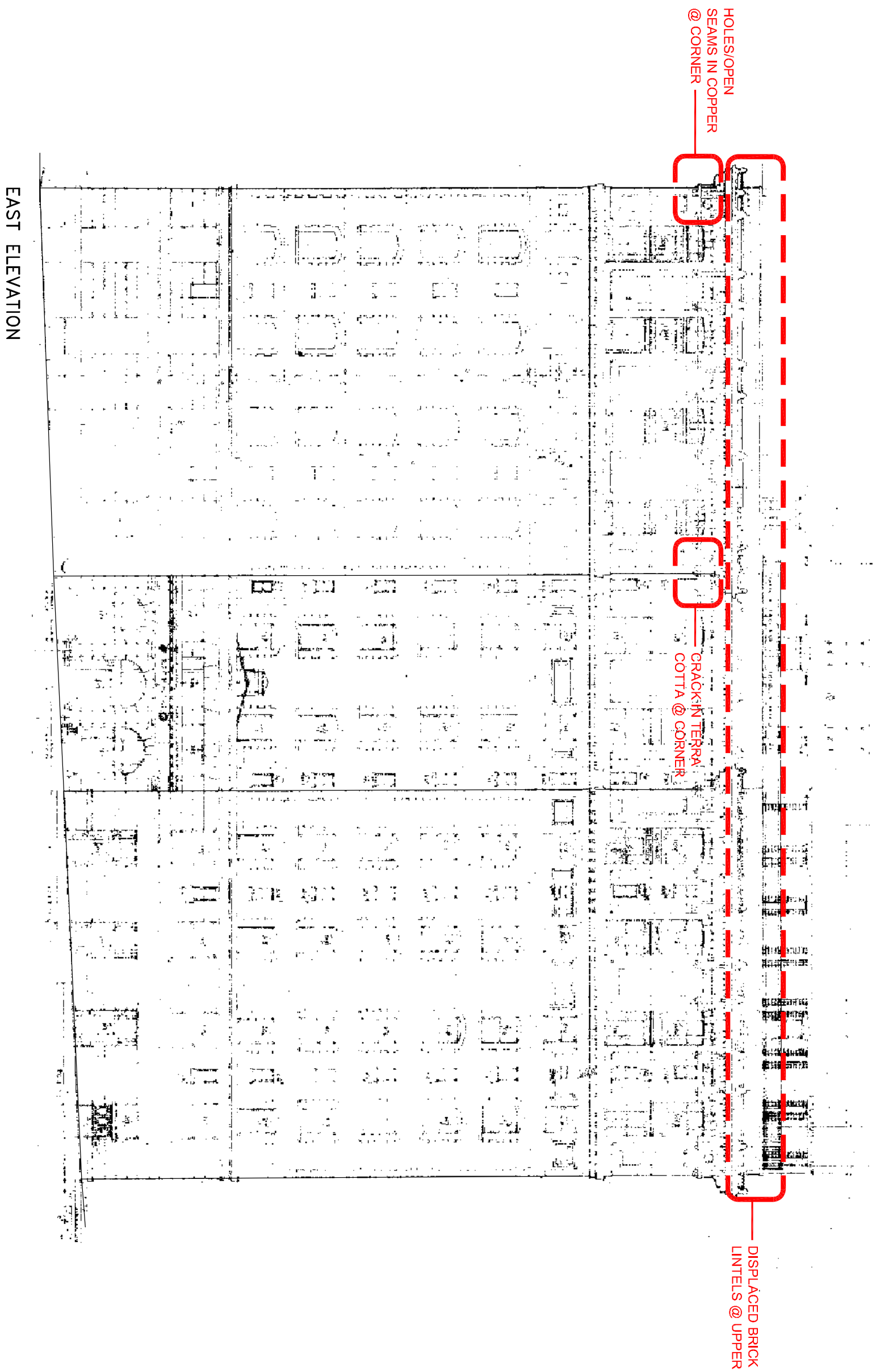
**Parking**

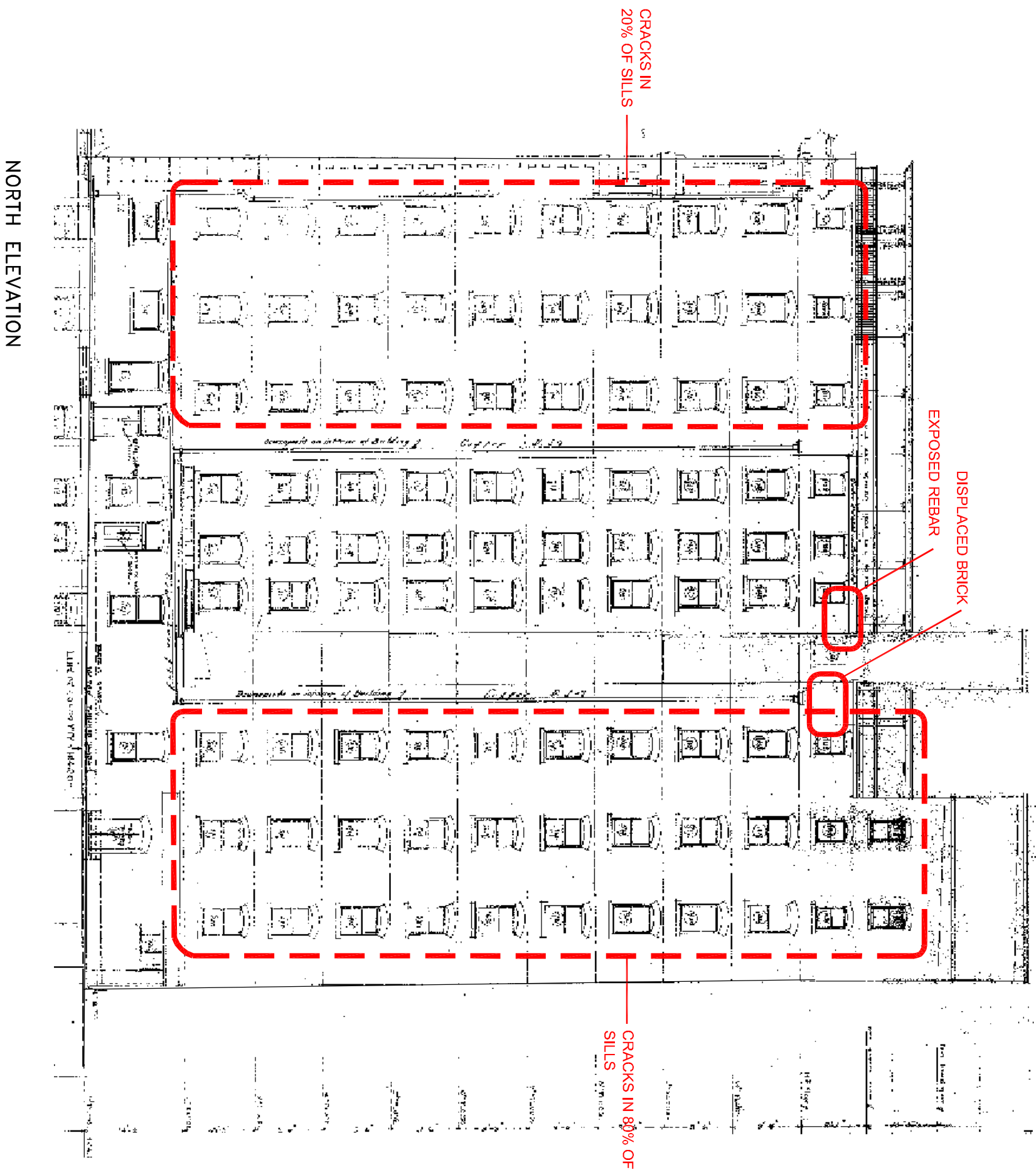
If occupied by State offices, parking for the 9<sup>th</sup> Street Building could be considered in tandem with that of the rest of the Capitol Square complex. As previously discussed there are a number of approaches for addressing the issue. Construction of an adjacent new office building would provide the opportunity for shared use of any parking provided by the new building.

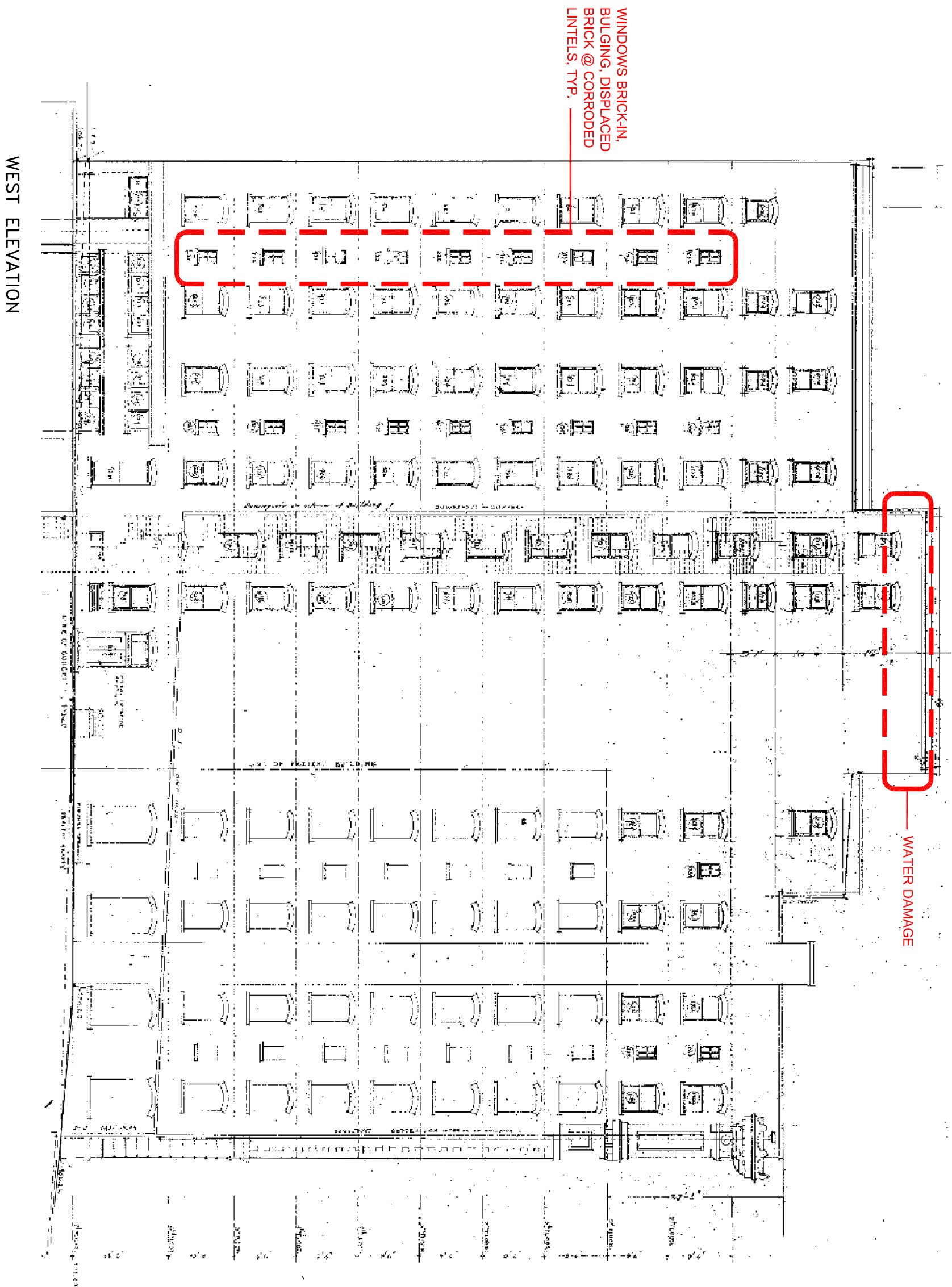
If the 9<sup>th</sup> Street Office Building is sold or a long-term lease arranged, private control of the building would make parking more of an issue – parking requirements would, presumably, be under the prevue of the City of Richmond. Per the City of Richmond Zoning Ordinance, 90-190 parking spaces would be required if the building was used for apartments or hotel, respectively. 380 spaces would be required if used for offices. One approach would be to arrange long-term parking with one or more of the nearby private parking lots or ramps. It may also be possible to obtain a variance for the parking requirements to minimize the number of spaces required.







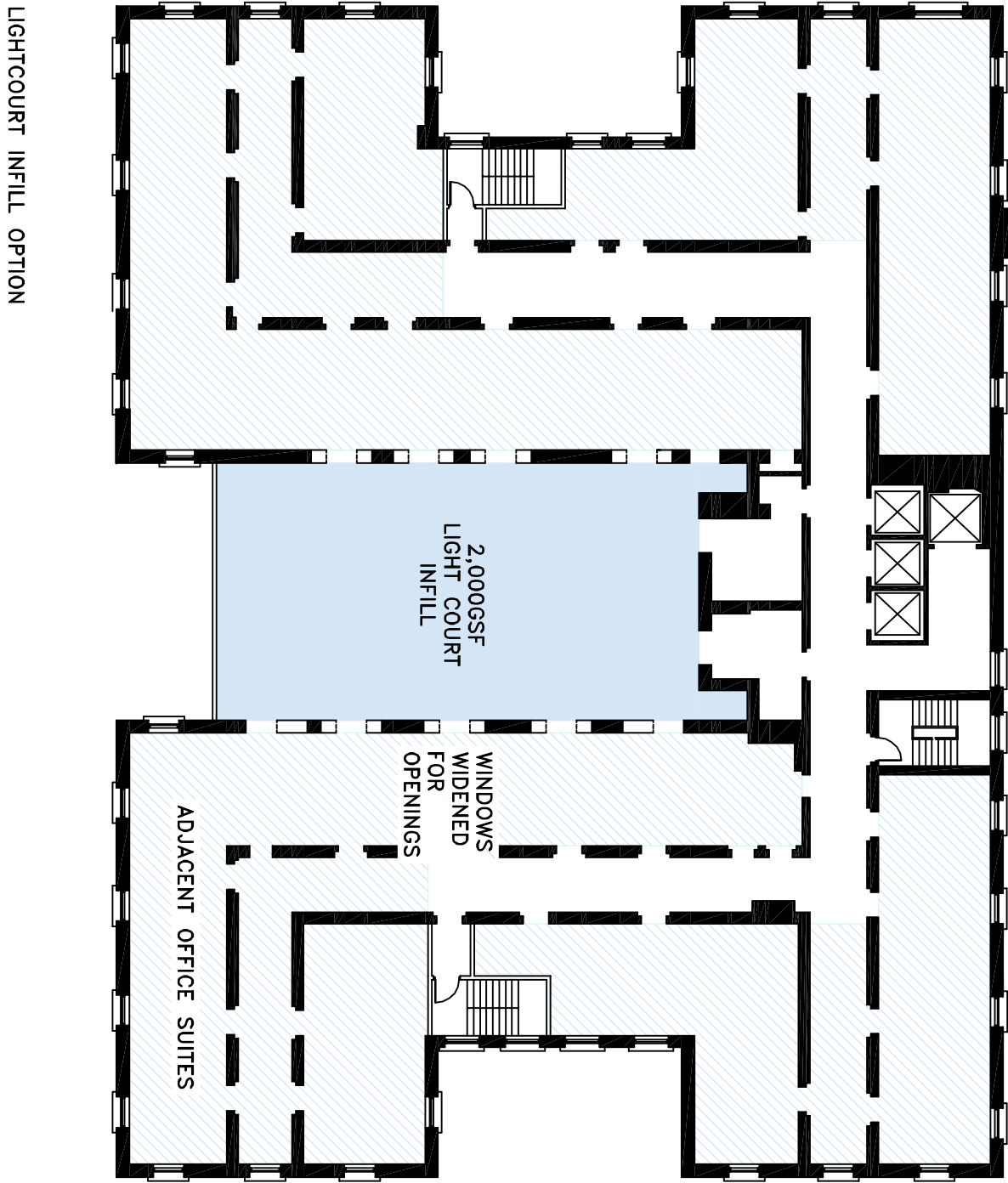












REAL ESTATE ANALYSIS

In an effort to evaluate the different development options, a real estate analysis has been prepared in order to test the viability of different uses for the existing 8<sup>th</sup> and 9<sup>th</sup> Street Buildings. In addition to identifying the advantages and disadvantages of each option the goal was also to consider the market conditions that might allow or restrict redevelopment of one/both of the historic structures as hotel and/or residential uses.

The analysis takes into account several variables that affect the review of redevelopment options. These variables include a number of factors that affect real estate development decisions, and include the following:

- Comparative projected redevelopment costs for new construction and renovation and comparison of alternative redevelopment budgets
- Project timing and phasing, both in respect to available market demand as well as for the changing availability and cost of capital to finance the project
- Requirements for, cost of, and allocation between uses for parking
- Cost of acquisition of the property for commercial development of preserved structures as hotel or residential projects
- Consistency with the required Commonwealth office program (determined to be a minimum of 250,000 square feet); the potential for non-office uses (such as residential or hotel conversions) vary/are not relevant depending upon the redevelopment scenario
- Market forces affecting value, sales/rental potential, available demand for space and the competitive context in downtown Richmond
- Structural complexity of demolition and new construction and of the structural systems in the two historic buildings
- Existing zoning and zoned requirements (parking, etc.) or needed rezoning
- Security issues with regard to the Federal Courthouse currently under construction adjacent to the Eighth Street Office Building
- The desire to activate this portion of Broad Street with street-level retail space and a pedestrian-oriented streetscape
- Urban design concerns about the loss of two well-known historic buildings, proximity to Capitol Square, and the potential for less compatible modern structures in the fabric of the city

Each of these variables should be a factor in determining the most satisfactory approach to redevelopment and provision of the required Commonwealth office space and supporting uses. As a real estate analysis, preservation of the two buildings appears to be a viable alternative to demolition; however, other factors may also influence the final decision.

As background research on alternatives for site redevelopment, the team contacted selected local architects, developers, and others familiar with local construction/rehabilitation costs, market trends, pending projects and past experience with renovation and development of housing, office and hotel properties in Richmond. The previous development report was reviewed to provide context for the program and development priorities developed in that process. Their views ranged from assessments of local demand and absorption patterns to the specific redevelopment potential of the two historic structures.

While some commented that the most immediately pending residential developments are oriented toward waterfront property along the James River, others suggested that one or both of the historic structures have both market and development appeal for redevelopment into housing.

One developer expressed an interest in buying both structures for a fair market value, with the commitment to preserve and redevelop the historic structures as market-rate for-sale and/or rental residential properties. Several also stated that Virginia State Historic Tax Credits would be both required as a powerful incentive to preservation; applicability of Federal Tax Credits was mentioned, but not considered to be as relevant as the Virginia credits. Others questioned whether current housing demand is sufficient to fill both buildings within a near term completion schedule, although lower interest rates and unmet demand for non-conventional housing (loft conversions and apartments and condominiums in historic structures) in downtown Richmond has reportedly created demand that current supply has not fully met. As one developer said, “everything that has been built or renovated has been occupied; there is still unmet demand”. Opinions about the condition of the structures for renovation were incomplete.

With regard to market-based uses under the preservation scenarios, there was greater interest in residential redevelopment than in conversion of one or both of the structures back to commercial hotels. Several of those interviewed cited the pending Miller & Rhodes building conversion into a hotel property. But the greatest concern was the potential for the Marriott Hotel adjacent to the Convention Center to construct a second rooms tower. Reportedly, the existing hotel (which runs at high average occupancies, but needs more room capacity to fully support the Convention Center) was constructed with foundation piers to add a second tower whenever Marriott decides to expand. From a market standpoint, the second Marriott rooms tower could absorb available room demand, and at a lower cost per room, as the supporting service spaces, conference rooms and other meeting-related amenities are already constructed as part of the existing hotel. This relative ease in capturing potential demand, combined with the lower cost-per-room for supporting amenities, and Marriott’s known brand and international reservations system will make conversion/redevelopment of one/both of the historic structures back into a commercial hotel more difficult to finance and compete with an expanded Marriott hotel product. In June of 2005, U.S. capital markets are becoming less interested in financing hotels, while the sustained housing market is still considered a stronger investment opportunity.

Based on building design/floor plate alternatives resulting from the concepts described above and on projected cost estimates for renovation, partial preservation and full demolition/reconstruction, a model was developed to test each of the options and demonstrates the final cost of each. The cost of providing parking has been included in each final cost calculation, and differs according to the redevelopment scenario. Impacts of the Virginia Historic Tax credit and, where applicable, the Federal Historic Tax Credit, have also been incorporated according to the redevelopment options for which preservation credits would apply. Refer to Appendix D.

**Program Options Summary**

After review of the physical and economic characteristics of the redevelopment options, analysis suggests the following:

- Preservation of one or both buildings appears to be a reasonable alternative, recognizing that the floor plate



efficiencies of the older structures for office use do not meet contemporary open plan office layouts. Also, the varying floor levels between the potential new Commonwealth office building site at Ninth and Broad makes shared cores between the new and historic structures difficult.

- The estimated price differential between new construction and appropriate renovation differs by about \$25 per square foot. This differential would be more than covered by the Historic Tax Credits
- Provision of parking is a greater issue under the renovation options due to the cost and complexity of trying to add new sub-grade parking under existing structures; there may also be security and parking separation requirements for Commonwealth office and other uses, as it may not be possible to mix the two within the same parking area. It may also be possible to consider remote parking for residential conversion, although that option could affect the potential rental level/sale price
- Demolition of the Eighth Street historic property would add a significant incremental cost for sub-grade shoring in order to protect the landmark St. Peter's Church on the adjacent site on Grace Street.
- Retail space as an activating use along Broad Street varies in its potential square footage from about 5,000 square feet to 10,000 square feet of street-level space, but can be incorporated into the project.
- Housing potential in downtown Richmond has paralleled that in other cities, with successful conversions of historic structures and proposed high-rise new construction housing along the James River. Housing redevelopment in this portion of downtown Richmond has mostly been smaller scale conversions of upper floors of commercial buildings, although there has been expressed developer interest in purchasing one or both of these structures for conversion to housing.
- The residential market in various pockets of Downtown Richmond has gained momentum in the past few years, but it should be noted that the blocks surrounding Capitol Square remain undersupplied with restaurants, nightlife and other amenities that attract downtown housing.
- While it is also physically possible to convert one or both of the buildings back to a hotel use, the potential to finance a hotel conversion will be more constrained due to the Marriott Hotel's pre-existing opportunity to add a second tower of rooms without requiring construction of meeting space and other amenities. There is some indication that downtown Richmond could support another full-service hotel, but the Marriott option will likely be easier to finance, easier to operate and more quickly implemented.
- Based on these findings, demolition of one or both historic structures should not be considered a foregone conclusion. Availability of incentives, developer interest and market potential all suggest that a blended project can also address the Commonwealth's office and parking needs without requiring demolition. Variables include the value of the acquisition cost and provision of required incremental parking for residential or hotel use under current (or revised) zoning mandates for parking.

More detailed comments by use follow.

**Downtown Full-Service Hotels**

Comparable full-service hotels in Downtown Richmond to which a development on the project site would be compared are listed below in Table 1. In total, there are nine competitive hotels in Downtown Richmond. The team obtained data, including average occupancy, average daily rate (or ADR), and revenue per room (REVPAR) for these hotels. Despite its

historic character, the Linden Row Inn should not be considered directly comparable because it is too small and does not have a national brand and reservation system. The John Marshall Hotel was a well-known historic hotel that was frequented by business travelers, however recent discussion of a possible conversion to condominiums.

Facility	Rooms
Commonwealth Park Suites	59
Crowne Plaza Richmond	299
Omni Richmond Hotel	361
Marriott Richmond	400
Radisson Hotel Historic Richmond	230
Preferred Jefferson Hotel	264
The Berkeley Hotel	56
John Marshall Hotel	60
Linden Row Inn	70
Total Rooms	1,799

Source: Smith Travel Research  
Table 1 Downtown Richmond Hotels

Excluding the John Marshall Hotel and the Linden Row Inn, the following data, obtained through Smith Travel Research, includes the remaining seven full-service hotels and 1,669 rooms in Downtown Richmond. The downtown full-service hotel market has been improving since 2002, when the travel industry as a whole experienced a downturn following the attacks of September 11<sup>th</sup> 2001 [Table 2]. In 2004, there was an increase of more than 30,000 roomnights, (representing an increase of 8.3 percent over 2003). In fact, the 2004 figure reached almost 397,000 total roomnights, just under the 404,300 occupied roomnights in 2000.

The increase in roomnights has positioned downtown on the cusp of supporting another full-service hotel. Traditionally, financial markets have considered occupancy rates above 65 percent to indicate sufficient support to introduce additional hotel rooms, and with the recent growth in roomnights, the occupancy rate for the hotels studied is 65.1 percent, up from 60.2 percent one year ago.

Annual Performance Indicators  
Downtown Richmond Full-Service Hotel Market, 1999-2005 (1)  
8th and 9th Street Development Project

	1999	2000	2001	2002	2003	2004	AVG. ANNUAL GROWTH '99-'04
Available Roomnights (Supply)	606,316	609,185	609,185	609,185	609,185	609,185	0.1%
Occupied Roomnights (Demand)	377,702	404,300	364,456	356,946	366,505	396,875	1.0%
Annual Occupancy (%)	62.3	66.4	59.8	58.6	60.2	65.1	1.1%
Average Daily Rate	\$ 101.55	\$ 104.57	\$ 109.34	\$ 108.43	\$ 109.58	\$ 111.00	1.8%
Revenue/Available Room	\$ 63.26	\$ 69.40	\$ 65.41	\$ 63.54	\$ 65.93	\$ 72.31	2.9%
YEAR-TO-YEAR % GROWTH							
Annual Occupancy	-	6.5%	(9.9%)	(2.1%)	2.7%	8.3%	
Average Daily Rate	-	3.0%	4.6%	(0.8%)	1.1%	1.3%	
Revenue/Available Room	-	9.7%	(5.7%)	(2.9%)	3.8%	9.7%	
FACILITY							
	ROOMS	%					
Radisson Hotel Historic Richmond	230	13.8%					
Preferred Jefferson Hotel	264	15.8%					
Marriott Richmond	400	24.0%					
The Berkeley Hotel	56	3.4%					
Commonwealth Park Suites	59	3.5%					
Omni Richmond Hotel	361	21.6%					
Crowne Plaza Richmond	299	17.9%					
TOTAL ROOM INVENTORY:	1,669	100.0%					

(1) Revenue per available room is the best measure of year-to-year growth because it considers simultaneous changes in both room rate and annual occupancy levels.

Source: Smith Travel Research; Economics Research Associates, May, 2005.

Table 2

While there is an indication of market support for another full-service hotel in Downtown Richmond, there are two other sites that appear to be better located to attract guests, and would likely be cheaper to build and therefore more marketable to financiers.

The Marriott has plans to build a second tower adjacent to its 400-room facility, which already includes the necessary non-revenue driving amenities such as meeting space and restaurants. For years, Marriott has maintained the option to build this second tower, resulting in a reluctance by other hotels to assume the risk of entering the market. This tower could be built at a lower cost than that of converting either of the buildings on Eighth or Ninth Streets. The 'Marriott Option' would more easily accommodate additional incremental room demand at a lower cost and higher profitability, as the hotel is already structured to add the additional rooms.

There is also a 216-room Hilton reportedly planned two blocks from Capitol Square, between 5<sup>th</sup> and 6<sup>th</sup> on Broad Street in the former Miller & Rhoads Department Store, and adjacent to the new performing arts center site currently under development. Current plans call for this facility to be part of a mixed-use building that would also include approximately 200 condominiums and a strong mix of out-of-town restaurants. While the developer has run into some roadblocks securing adequate financing (Possibly the Marriott discussing construction of its second tower), it also appears to be better situated to meet the demand for another full-service hotel in Downtown Richmond.

**Residential Re-Use: Condominiums and Apartments**

Like many downtowns nationally, Richmond has experienced a renewed interest in downtown housing. Research indicates that in 2004, almost 1,400 residents moved into the zip codes 23219 and 23220, according to the Experian New Movers Database. These zip codes cover most of the new Downtown housing in Richmond. Maps of these zip codes, as well as the origin of new Downtown residents, are displayed in the Appendix. Approximately 70 percent of new residents to Downtown came from either within the City of Richmond, or from Henrico County. The zip codes with the highest frequency of relocation to downtown were 23220 and 23221, which is directly to the West of the 23220 Zip Code.

The most popular developments are about ½ to ¾ of a mile to the South, closer to and along the James River. These projects are located in Shockoe Slip, and Shockoe Bottom, where there are also shops, restaurants, riverboat tours, and nightlife are available.

Riverfront Towers, located at Shockoe Slip, is a mixed-use building with apartments, condominiums, and office space that was fully absorbed in approximately six to eight months. Similarly, the new residential buildings in Shockoe Bottom and Tobacco Row have been successful developments that have appealed to students at both VCU (Virginia Commonwealth University) and medical campuses, as well as young urban professionals and empty nesters that work downtown. Many younger state employees, especially those at jobs with high rates of turnover and who pay rent, are choosing to live down at Tobacco Row.

Overall, the initial conversions of older and historic buildings and of new construction of multi-family housing has been viewed as a success. As a result, a second round of projects are either under construction or planned, however the only one close to Capitol Square is the condominium project that would be part of the old Miller and Rhoads building.

Many of the for-rent buildings received Historic Tax Credits whose time limitations on conversion to condominiums will end over the next few years. As the downtown housing market continues to grow, it is likely that many of these buildings will be converted into for-sale units, with the result that potential demand for additional for-rent units in these neighborhoods will likely rise. One developer cited the potential for rental and for-sale units to students and faculty of the Virginia Medical School located a few blocks from the site as an underserved market. In addition, there has been discussion of use of the apartments by members of the General Assembly during session.



## 7. NEW CONSTRUCTION

Development of the 8<sup>th</sup> and 9<sup>th</sup> Street site must include construction of a new building in order to meet the needs of the Commonwealth. However, the location, configuration and size of the building may vary depending on the development scheme. The following issues must be considered when developing new construction options.

### USE

The primary function of any new construction on the 8<sup>th</sup> / 9<sup>th</sup> Street site would be office space for the Commonwealth. The size of the actual building would vary depending on the configuration of the site. In addition to offices, it would be possible to incorporate other functions into the building: retail, public assembly spaces, galleries, etc. Retail could help to animate the street life adjacent to the building, as well as serve the occupants and office workers in neighboring facilities. Other activities would also add life to the building and area. However, the introduction of such functions must be balanced with the very real security concerns that arise with the introduction of mixed uses to the site.

### ARCHITECTURAL EXPRESSION

There is a wide range of options for the design of contemporary architecture, from neoclassical to modern. Similarly, the use of materials can range from glass to masonry. Given that the project site is one of the most significant in Richmond and is an integral part of the Capitol Square complex, an appropriate architectural expression is required. Much contemporary construction is built with an expected life span of 25-30 years. The Square is comprised of over 200 years of architecture and any new building must fit within that context – typical office construction is not appropriate. This should be reflected in the design, construction and materials of new construction. This is not to say that a contemporary design is not appropriate, but rather, that any design should be of a level commensurate to its location and use.

### CONFIGURATION

The 8<sup>th</sup> and 9<sup>th</sup> Street Buildings are constructed on a sloping site. This, combined with differing floor-to-floor heights, makes connecting the buildings difficult. The current configuration provides a ramp connecting the two. The second floor of the 9<sup>th</sup> Street Building is approximately 12” higher than the first floor of the 8<sup>th</sup> Street Building [Figure 7.1]. In addition, each building is elevated above grade at the first floor entrance – approximately 30” at 8<sup>th</sup> Street. Combining the existing structures with new construction presents a challenge in making connections at the floor levels [Figure 7.1]. The differing floor levels make the construction of a common elevator core difficult and expensive. The first and/or second floors could be connected by ramps, as could selected upper levels where floor have a minimal difference in elevation.

Contemporary office buildings are rated by “Class”, typically ranging from “A” to “C”. Classes “B” and “C” tend to be older, unrenovated buildings. Most new office construction is Class “A”, as would be any new construction of the project site. Class

“A” buildings are defined by several factors: level of finish, building systems and services, and configuration. The 8<sup>th</sup> and 9<sup>th</sup> Street Buildings would most likely be rated as Class “B” , primarily due to their building systems and configuration. The most significant differences are the floor-to-floor height, floor plate and configuration [Figure 7.2].

The existing floor-to-floor heights of the upper floors of 8<sup>th</sup> and 9<sup>th</sup> Streets are 9'-6" and 10'-7 ½" , respectively. These are significantly lower than current construction practices for an office building – usually in the range of +/-13'. This height allows for the installation of up-to-date building systems, primarily HVAC.

The 8<sup>th</sup> and 9<sup>th</sup> Street Buildings have floor plates of 9,500 and 14,000 square feet, respectively. This is in contrast to a 20-24,000 square floor minimum for most Class “A” buildings. This, combined with a larger structural grid, allows for contemporary open space office planning and better functional relationships. This is currently limited in the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings due to their 13' to 16' structural grids. The spaces in the existing buildings are further confined by the “H” and “U” shape of the floor plates, which makes the contiguous usable areas even smaller.

The sloping site does provide advantages for access to parking. Placing the first floor of new construction at the Broad street elevation, the sloping site would allow access to below-grade parking at grade for the first level, thus minimizing the loss of floor are on the first floor for ramps.

## STRUCTURE

The following summarizes general structural criteria and particular areas of concern for new construction on the project site.

### Structural Loadings: Uniformly Distributed Live Loadings

The following values are specified by the applicable codes and standards or are higher values selected for use on this project:

Occupancy or Use	Uniform [psf]	Concentrated [pounds]
Lobbies / Assembly	100 <sup>[1]</sup>	2000 lbs / 2.5 ft <sup>2</sup>
First Floor Corridors	100 <sup>[1]</sup>	2000 lbs / 2.5 ft <sup>2</sup>
Stairwells	100	300 lbs / 4 in <sup>2</sup> [tread]
Corridors above First Floor	80 <sup>[1]</sup>	2000 lbs / 2.5 ft <sup>2</sup>
Mechanical	150 <sup>[1]</sup> <sup>[2]</sup>	
Offices	50 <sup>[1]</sup>	2000 lbs / 2.5 ft <sup>2</sup>
Roof	20	
Stairwells	100	
Light Storage	125	

<sup>[1]</sup> SDL 20 psf partitions also applied

<sup>[2]</sup> Used in absence of actual weight of mechanical equipment

### Foundations and Below-Grade Construction

New foundations will be required for additional structures on the project site. Before disrupting soil in the neighboring site to the existing buildings, underpinning of any existing buildings to remain is likely required, given the proximity of new below-

grade construction to existing foundations. The underpinning of the existing buildings would likely utilize reinforced concrete with conventional approach-pit underpinning, although alternatives should be considered carefully. If the existing buildings and/or their facades are to be retained, the sensitivity of the exterior masonry to settlement should be carefully reviewed, considering the consequence of generating some cracking in these facades.

If new structure is programmed to contain several levels of below-grade parking, the foundation system for the new construction will likely consist of subgrade reinforced concrete walls, slabs, and columns.

**Impact on Adjacent Structures**

Any new construction must consider the impact on adjacent structures: the 8th and 9th Street Buildings, and St. Peter's and St. Paul's Churches. In addition to underpinning, St. Peter's is reportedly built on wooden piles. There may be a problem generated by the possibility of drawing down the watertable, either in the short-term or permanently. Previously saturated wood piles exposed to air may begin to decompose. The impact of construction vibration should also be considered due to the potential damaged to the stained glass windows and other artifacts of St. Peter's and St. Paul's Churches, including the historic structures themselves.

**Below Grade Construction Limitation**

A soils report prepared as part of a previous development proposal determined that groundwater is an issue for construction below-grade. The project was designed with three levels of parking below-grade, and consideration was being given to providing only two levels due to this concern. The issue has also been raised with the restoration of the Capitol and construction of the Capitol Extension. Groundwater issues can be overcome by selected construction methods, but it can result in an increase in construction costs.

**Superstructure**

The superstructure of the new construction will likely be a laterally-braced structural steel frame. Floor slabs would likely be concrete on composite metal deck. The proposed typical floor-to-floor height of the new structure would be in the range of 13'-0". In this scenario, the new building will only connect to the structure of the existing buildings at discreet levels.

**Façade Retention: A New Building Behind a Historic Façade**

It would be possible to retain the existing primary facades [Broad and 8th Streets and 9th and Grace Streets] for use in tandem with new construction behind Figure 7.3. In addition to restoration of the facades, structural stabilization would be required due to the change in structure. As the floor levels of new office construction would not align with the existing window grid of the original façade, one solution would be to hold the new construction back from the façade, creating an atrium-like space or smaller shaft space. Temporary structural systems will be required in order to brace the existing façade during the construction of the proposed new infill building. A sidewalk closure and construction of an exterior full-height bracing frame can allow for freedom to work within the boundaries defined by the existing facades.

Temporary connection to the existing façade should minimize damage to historic masonry. Movement limitations should be

carefully considered with respect to predicted and recommended tolerances for the historic masonry facades. For the scenario where a new atrium is introduced behind the existing facades, a new framework of columns and beams [likely at the original building floor levels] would be required to create a network of steel support behind the historic masonry. It is assumed that the roof above the atrium space would serve to protect the back side of the existing masonry façade. Depending on the desired openness of the atrium space, the stiffness of the façade backup steel should be matched with selected bracing points to the lateral system of the new infill construction. Bracing of the façade to the new construction will required careful consideration of seismic forces given the relatively large mass of masonry potentially offset from the lateral system of the new construction.

This approach is of questionable preservation merit and would be seen only as a mitigating solution for demolition of the rest of the building

**BUILDING SYSTEMS**

**Mechanical Systems**

The calculated load for a new building would be determined by the actual area of construction. A central plant chilled water system would be proposed. The cooling towers would be located on the roof of the building and the water-cooled chillers could be located on a new penthouse structure or in the basement. Supply and return chilled water pipes would be routed vertically on both sides of the main corridor from the basement to the penthouse. Several variable volume AHU's would be installed at each level to provide conditioned air to the open office areas at each side of the main corridor. Outside air for ventilation would be provided at each mechanical room to meet the minimum ventilation requirements. CO2 sensors would control quality of outside air to meet minimum ventilation requirements.

If a new structure is combined with one or more of the existing buildings for office use it would be possible and economical to create a common central system. The central plant could be sized for the required load, taking advantage of the diversity and efficiency provided by the central system. The larger components would be installed in the new construction building and the chilled water would be distributed via end suction pumps to the other buildings.

Toilet and general exhaust would be routed to the roof and discharged through a roof opening to be architecturally coordinated. An exhaust system would be provided to provide adequate ventilation for the parking levels.

**Electrical Systems**

The electrical system would be 480Y/277-volts, 3-phase, 4-wire, served from a Dominion Power vault-mounted transformer. The rating of the service would be determined by the development option selected. If central plant functions are consolidated for existing and new buildings, it may be practical to provide a separate service for the central plant. That service, [2000 to 3000-amperes, depending on the option] would replace a portion of other services.

The main service feeder would be copper conductors in a duct bank. The service equipment would consist of a main bolted pressure switch, main surge suppression, provisions for Dominion Power metering, provisions for retail metering, customer



metering, and feeder circuit breakers.

Power would be distributed to the floors and main mechanical equipment locations by aluminum power bus duct. Each floor would have at least one electrical closet consisting of the bus riser, a 480Y/277-volt panel serving lighting and mechanical equipment, a transformer and 208Y/120-volt panel for general-purpose electrical loads. This room would also serve miscellaneous electrical equipment including fire alarm terminal cabinets and security panels.

Major mechanical equipment locations would include either distribution panels and combination starters and VFDs, or Type 2, class B motor control centers. Distribution to major mechanical equipment would be copper conductors in EMT, with flexible conduit for the final connection. Branch circuit wiring, where concealed, will be copper conductors in type MC cables.

Emergency power would be from a self-contained, diesel engine generator with associated distribution and transfer switches. This would power all required life safety systems and one elevator. The size is estimated to be 150 kW.

Lighting would be high efficiency fluorescent fixtures with ratings and controls designed to meet or exceed the International Energy Conservation Code. Limited incandescent fixtures would be used for architectural purposes. Some limited exterior lighting may be Metal Halide. Exit and egress lighting would be by normal fixtures circuited to generator circuits. Controls would ensure that all exit and egress lighting is on in case of normal power failure.

A formal evaluation would be needed to determine the need for a lightning protection system. If, as expected, a lightning protection system is recommended, it would be a UL Master Labeled system with concealed down conductors. Air terminals and conductors would be copper or aluminum as required to coordinate with architectural considerations.

**Plumbing**

New water service, plumbing piping systems and low consumption water saver fixtures with hands free sensor type faucets and flushing devices should be provided. A new dedicated water service would be required to provide wet pipe sprinkler protection throughout the building.

**Life Safety**

A comprehensive, high-rise compatible, fire and smoke detection, alarm and voice evacuation system should be installed and coordinated with the sprinkler system. The system should be of fully electronic, addressable design. It should have remote reporting compatibility with a proprietary central station or to an off-site facility selected by DGS.

**PARKING**

The addition of new office space inevitably raises the question of parking. The maximum build-out of the site, per City of Richmond zoning, would require approximately 1,000 parking spaces. The Commonwealth can, and does, look beyond the immediate site to address parking needs through a series of lots and garages. The Commonwealth is not required to meet

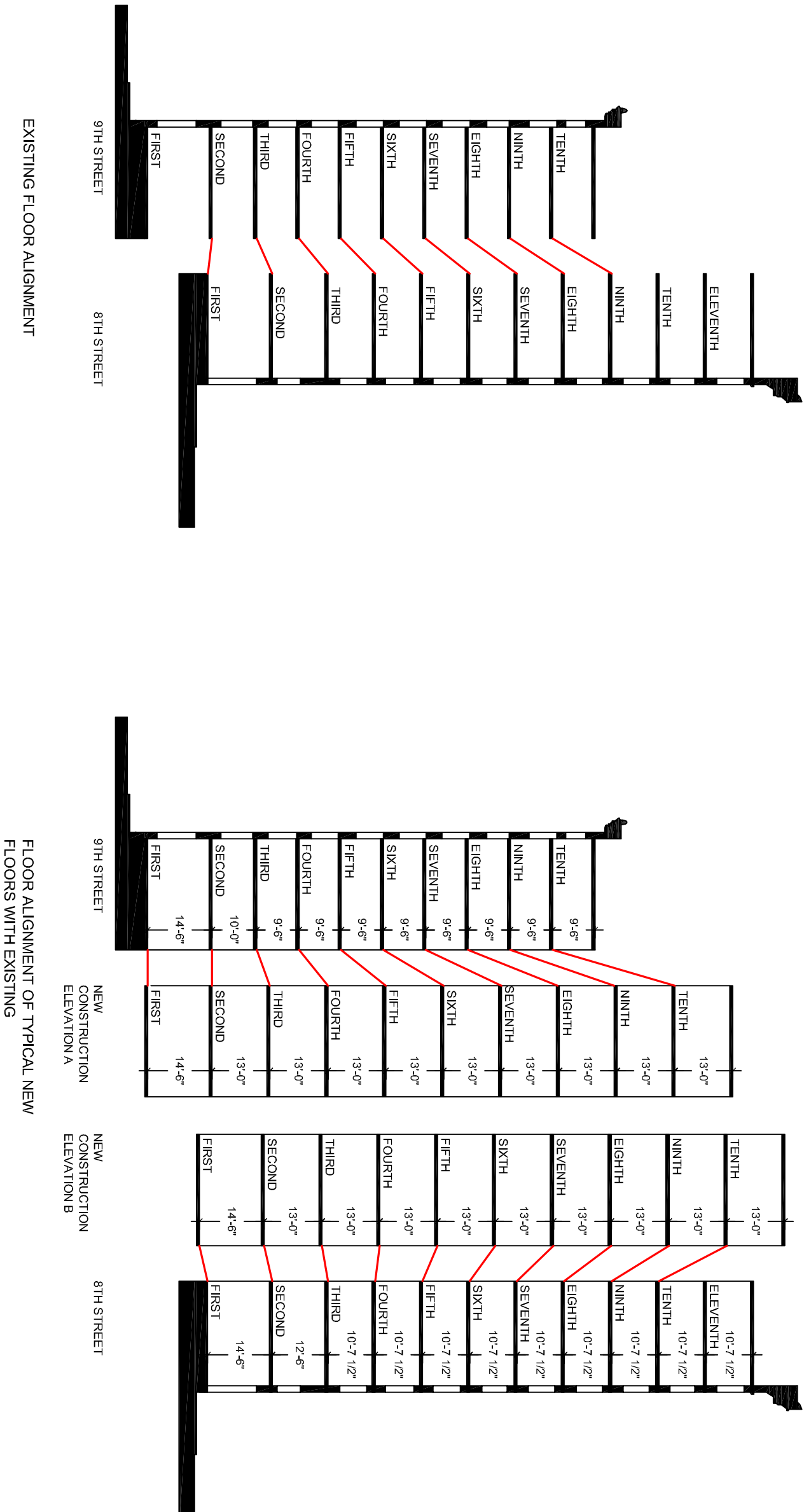
City of Richmond zoning requirements.

Limiting the parking to three below-grade levels, due to constructability issues, allows for up to approximately 440 parking spaces with the entire site built-out. Smaller new construction options reduce the parking spaces accordingly. Providing parking above-grade is not desirable from an urban planning standpoint, given that this site faces directly onto Capitol Square and Broad Street. It is also questionable whether additional parking quantities are needed that would require above-grade parking.

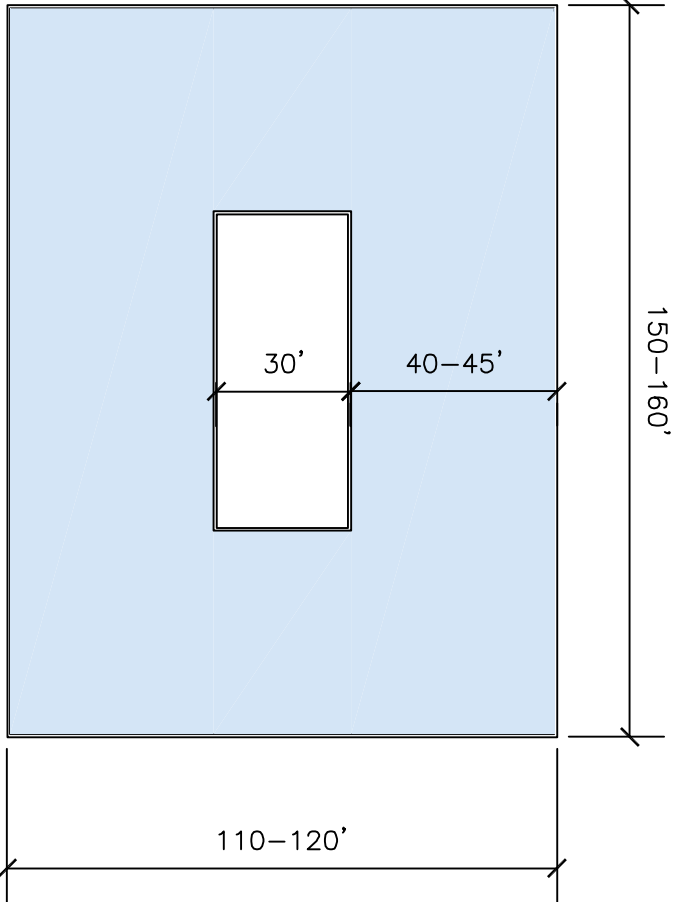
The incorporation of parking into new construction raises security concerns. The Commonwealth would want to be able to control access to the parking – both cars and people.

Access to the parking could be provided from 8<sup>th</sup>, Grace or 9<sup>th</sup> Streets. It is generally agreed that access from Broad Street is not desirable due to pedestrian conflicts and the urbanistic impact on the streetscape. Similarly, access from 9<sup>th</sup> Street would have a negative impact on the Square. Queuing during peak morning hours must be taken into consideration.

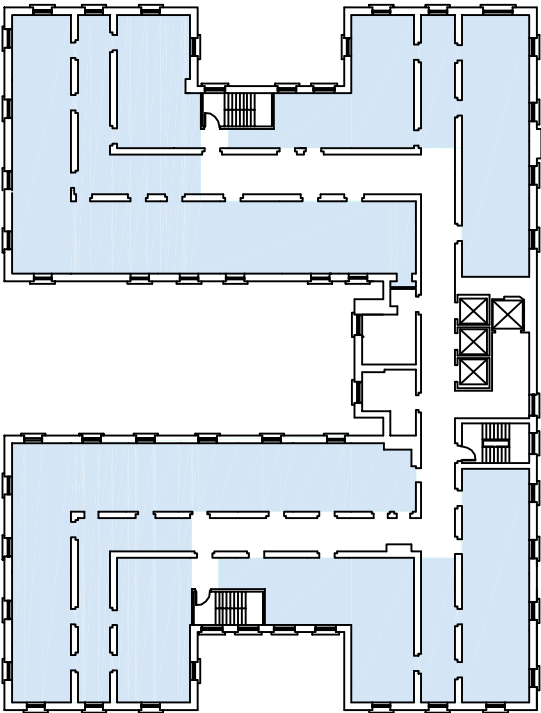
Preliminary discussions with St. Peter's Church reviewed the possibility of utilizing a portion of the existing parking lot for access to a new parking facility on the project site. This would allow for two lanes to serve the garage, negating the need for access from either 8<sup>th</sup> or 9<sup>th</sup> Streets. In return, the church could be granted rights to use the garage as their needs require. Further development of the selected design and discussions with the church would be required to further explore this option. The mixing of Commonwealth and other parking users raises security issues that would have to be considered.



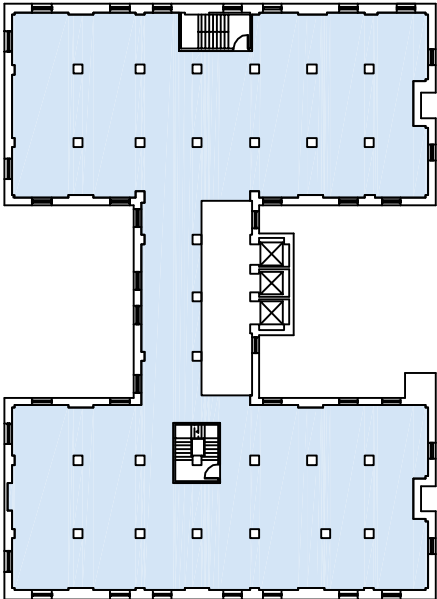
Criteria	Class A	8th Street	9th Street
Floor Plate	20,000gsf	9,500gsf	14,000gsf
Floor-to-Floor Height	13'-0"	10'-0"	9'-6"
Structural Grid	20'	13'-6"	16'-0"
Egress	Code Compliant	Deficient	Deficient
Elevators	Code Compliant	Deficient	Deficient
ADA	Accessible	Deficient	Deficient
HVAC	25-30 Years	Deficient	Deficient
Electrical	25-30 Years	Deficient	Deficient
Plumbing	25-30 Years	Deficient	Deficient



TYPICAL CLASS "A" OFFICE  
20-25,000GSF PER FLOOR

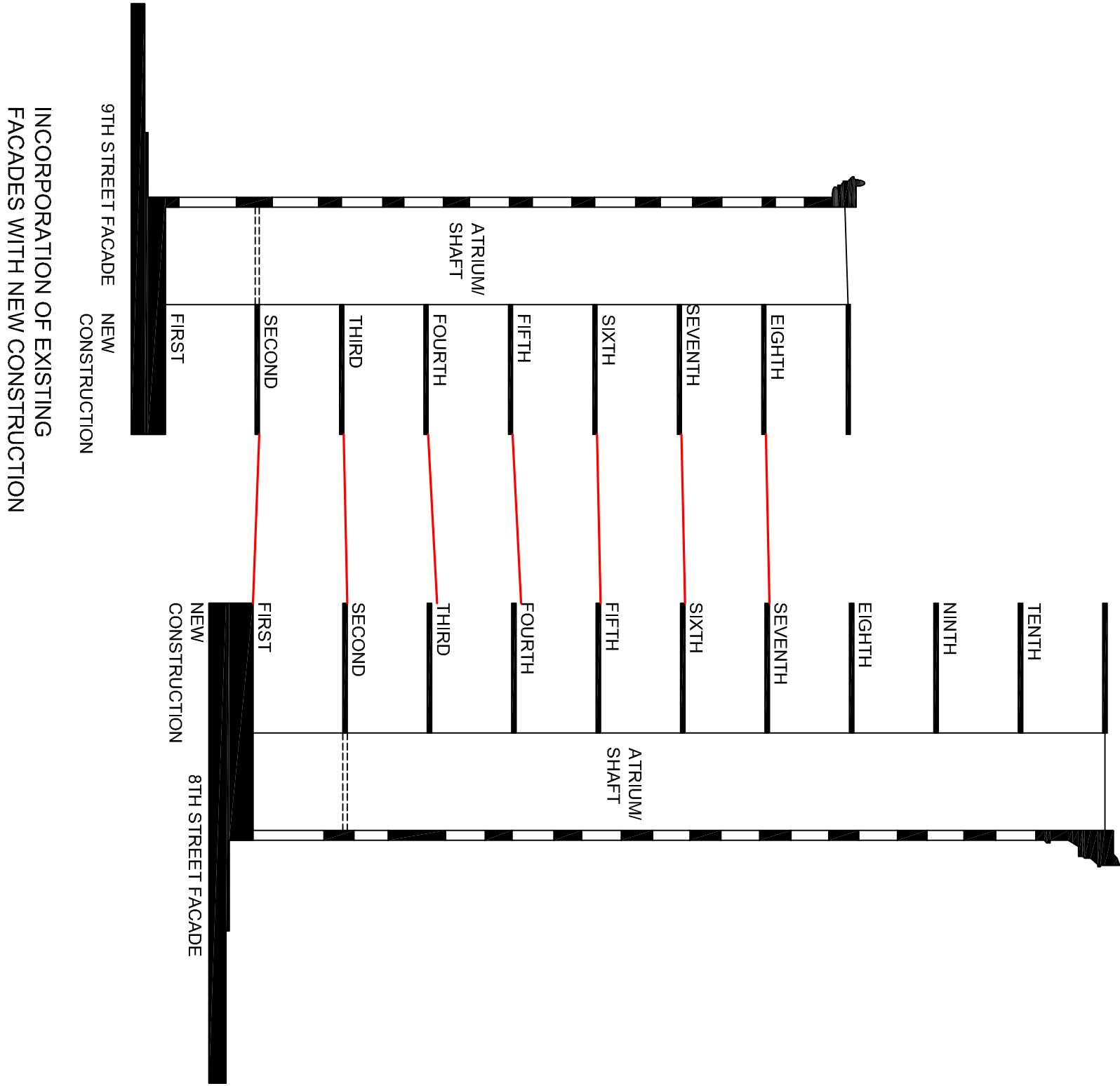


9TH STREET BUILDING  
14,000GSF PER FLOOR



8TH STREET BUILDING  
9,500GSF PER FLOOR





## 8. DEVELOPMENT OPTIONS

As a means of exploring alternative solutions for the use of the project site, four building configurations have been developed, based on the available combinations of existing and new construction [Figure 8.1]. These options are further developed by assigning different functions to the buildings: offices, residential, hotel and retail. Once the basic relationships are understood, the options can be evaluated based on the various criteria developed as part of this project.

The options share a number of assumptions:

- New construction building size is limited by the Richmond Zoning Ordinance, although the Commonwealth is not required to follow these regulations. The will result in a building appropriate for the site in relation to it context, as well as in keeping with the guidelines of the Virginia State Capitol Master Plan which calls for a low-scale building.
- Office square footage is provided in each option large enough to provide swing space for the renovation of the General Assembly Building.
- Retail is provided along East Broad Street to serve building occupants and help to animate the street, and minimized along 9<sup>th</sup> Street facing the Square.
- Parking is limited to below-grade locations. Above-grade parking is inappropriate facing the Square.
- A minimum of 150 parking spaces are provided to serve the General Assembly.
- Parking access is not provided from Broad Street due to congestion and pedestrian concerns.
- Where new office construction abuts the existing buildings used for offices, connections are made at floor levels that align.
- New construction is held back from the existing buildings where they are used for residential or hotel functions to provide access to light and air.

The options are as follows:

- Option A** Renovate both the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings for use as office space for the Commonwealth of Virginia, and construct a new office building on the vacant parcel at 9th and Broad Street.
- Option A1** Renovate the 9th Street Building for office space, construct a new office building at 9th and Broad Streets, and renovate the 8th Street Building as a hotel or residential project.
- Option B** Renovate the 9th Street Building for offices, demolish the 8th Street Building and construct a new office building along Broad Street.
- Option B1** Demolish the 8<sup>th</sup> Street Building, preserving the façade as part of a new office structure along Broad Street. Renovate the 9th Street Building for a residential or hotel project.
- Option C** Renovate the 8th Street Building as office space and demolish the 9th Street Building. Build a new office building along 9<sup>th</sup> Street.
- Option C1** Demolish the 9<sup>th</sup> Street Building, preserving the façade and lobby as part of a new office structure along 9th Street. Renovate the 8th Street Building for a residential or hotel project.

- Option D** Demolish both existing buildings and construct a new office building over all three sites.
- Option D1** Preserve the façade and lobby of the 8th Street Building, demolish the 9th Street Building and construct a new building over all three parcels.
- Option D2** Preserve the façade and lobby of the 9th Street Building, demolish the 8<sup>th</sup> Street Building and construct a new office building on all three site.
- Option D3** Preserve the facades of both historic structure and the first floor lobby of 9<sup>h</sup> Street. Construct a new office building behind the two facades covering the entire site.

The zoning calculations, square footage, parking and use allocations per option are summarized in the following Tables.

**Table 1** summarizes the square footage allowed by City of Richmond Zoning which, for the purposed of this Plan, is being used as the maximum size of a building to be considered for the site. Total building square footage is a factor of the Floor Area Ratio for the site, which is 6. In the simplest terms, a new building may contain 6 times the area of its site. Bonus square footage is given for certain amenities - most are based on design choices that would be made as a project develops past this current study. For the actual design for the selected project, additional floor area could be added if the other amenities were provided. The only bonus being taken as part of this study is for enclosed parking. Floor area calculations are allowed to exclude interior parking areas. Mechanical areas are also excluded - 5% has been added to the allowable floor area for each option.

TABLE 1 Zoning Calculations	New Construction									
	A	A1	B	B1	C	C1	D	D1	D2	D3
Site SF	24,000	24,000	37,000	37,000	44,000	44,000	57,000	57,000	57,000	57,000
FAR 6.0 Allowable Floor Area	144,000	144,000	222,000	222,000	264,000	264,000	342,000	342,000	342,000	342,000
Pedestrian Plaza Bonus*	-	-	-	-	-	-	-	-	-	-
Building Setback Bonus*	-	-	-	-	-	-	-	-	-	-
Arcade Bonus*	-	-	-	-	-	-	-	-	-	-
Improved Roof Area Bonus*	-	-	-	-	-	-	-	-	-	-
Reduction in Lot Coverage Bonus*	-	-	-	-	-	-	-	-	-	-
Enclosed Parking Bonus										
	160	16,000	16,000							
	270		27,000	27,000						
	320				32,000	32,000				
	440						44,000	44,000	44,000	44,000
Dwelling Use Bonus*	-	-	-	-	-	-	-	-	-	-
Total Allowable Floor Area	160,000	160,000	249,000	249,000	296,000	296,000	386,000	386,000	386,000	386,000
Gross Floor Area [Allowable + 5%]	168,000	168,000	261,450	261,450	310,800	310,800	405,300	405,300	405,300	405,300

\*Design-based options not included in calculations

**Table 2** details the allocation of gross square footage for the new construction included in each development option based on the zoning analysis in Table 1. All options assume three levels of parking below grade; area which is not required to be included in the allowable square footage calculations.

TABLE 2												
Gross Square Footage			New Construction									
Floor	8 <sup>th</sup>	9 <sup>th</sup>	A	A1	B*	B1	C	C1	D	D1	D2	D3
P3			24,000	24,000	37,000	35,000	44,000	44,000	57,000	57,000	57,000	57,000
P2			24,000	24,000	37,000	35,000	44,000	44,000	57,000	57,000	57,000	57,000
C/P1	15,200	21,600	24,000	24,000	37,000	35,000	44,000	44,000	57,000	57,000	57,000	57,000
1	12,400	17,700	24,000	24,000	37,000	35,000	44,000	44,000	57,000	57,000	57,000	57,000
2	12,400	14,600	24,000	24,000	39,000	30,000	44,000	40,000	57,000	52,000	53,000	48,000
3	9,500	14,000	24,000	21,000	39,000	30,000	44,000	36,000	57,000	52,000	53,000	48,000
4	9,500	14,000	24,000	21,000	39,000	30,000	44,000	36,000	57,000	52,000	53,000	48,000
5	9,500	14,000	24,000	21,000	39,000	30,000	44,000	36,000	57,000	52,000	53,000	48,000
6	9,500	14,000	24,000	21,000	39,000	30,000	44,000	36,000	57,000	52,000	53,000	48,000
7	9,500	14,000	24,000	21,000	39,000	30,000	44,000	36,000	57,000	52,000	53,000	48,000
8	9,500	14,000		15,000	2,450	30,000	2,800	36,000	6,300	36,300	30,300	48,000
9	9,500	14,600				16,450		10,800				12,300
10	9,500	9,200										
11	9,500											
Total GSF	125,500	161,700	240,000	240,000	384,450	366,450	442,800	442,800	576,300	576,300	576,300	576,300
Total GSF without Cellar	110,300	140,100	168,000	168,000	273,450	261,450	310,800	310,800	405,300	405,300	405,300	405,300

\* Includes 6 floors of 2,000sf 9th Street lightcourt infill

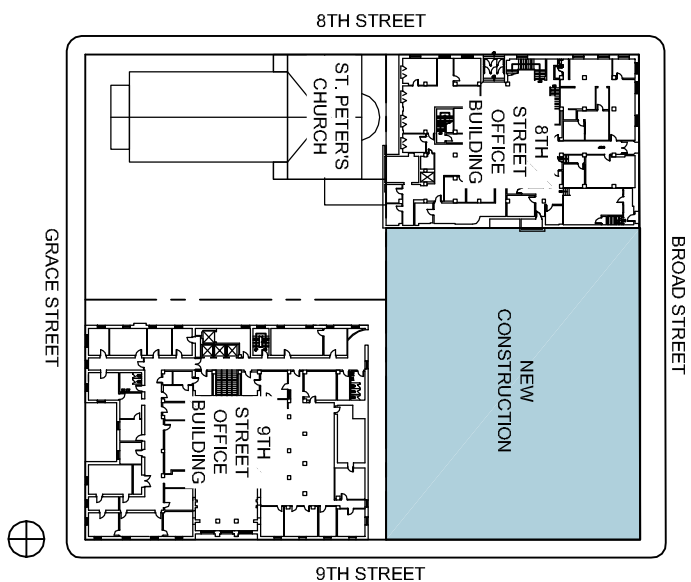


**Table 3** details the square footage allocation for each development option by use: offices, retail, residential, hotel and parking.

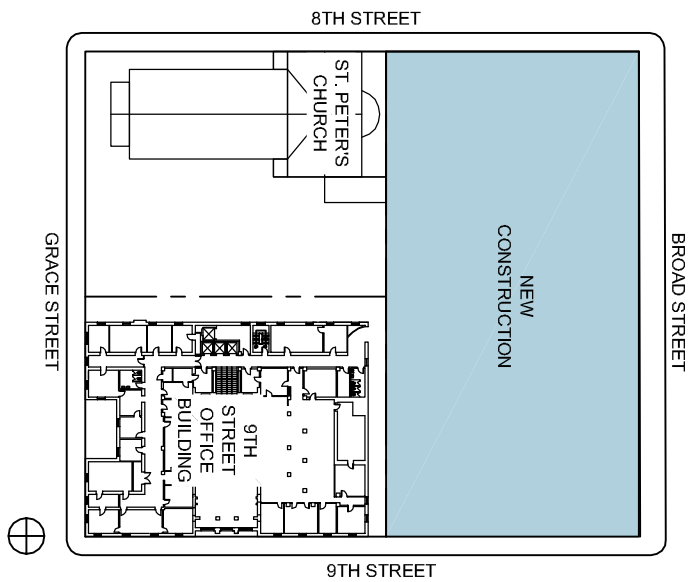
TABLE 3		Option GSF									
Use		A	A1	B	B1	C	C1	D	D1	D2	D3
		Renovate 8 <sup>th</sup> & 9 <sup>th</sup> , Build on Corner	Sell/Lease 8 <sup>th</sup> , Renovate 9th, Build on Corner	Demolish 8th, Renovate 9 <sup>th</sup> , Build along Broad Street	Demolish 8th, Sell/Lease 9 <sup>th</sup> , Build along Broad Street	Renovate 8 <sup>th</sup> , Demolish 9 <sup>th</sup> , Building along 9 <sup>th</sup> Street	Sell/L ease 8 <sup>th</sup> , Demolish 9 <sup>th</sup> , Build along 9 <sup>th</sup> Street	Demolish 8 <sup>th</sup> & 9 <sup>th</sup> , Build on Entire Site	Demolish 8 <sup>th</sup> & 9 <sup>th</sup> , Retain 8 <sup>th</sup> Façade, Build on Entire Site	Demolish 8 <sup>th</sup> & 9 <sup>th</sup> , Retain 9 <sup>th</sup> Façade, Build on Entire Site	Demolish 8 <sup>th</sup> & 9 <sup>th</sup> , Retain Both Facades, Build on Entire Site
Offices	8th Street Reuse	110,300				110,300					
	9th Street Reuse	140,100	140,100	140,100							
	9th Street Lightcourt Infill			12,000							
	New Construction	162,000	162,000	251,450	251,450	304,800	300,800	395,300	393,300	391,300	389,300
	Office NASF [8th - 80%, 9th - 70%, New - 85%]	412,400	302,100	403,550	251,450	415,100	300,800	395,300	393,300	391,300	389,300
	Office NASF [8th - 80%, 9th - 70%, New - 85%]	324,010	235,770	323,802	213,733	347,320	255,680	336,005	334,305	332,605	330,905
	Retail										
	8th Street Reuse										
	New Construction	6,000	6,000	10,000	5,000	6,000	6,000	10,000	7,000	10,000	7,000
	Residential										
Residential	8th Street Reuse		110,300				110,300				
	9th Street Reuse				140,100						
	Hotel*										
	8th Street Reuse										
	9th Street Reuse										
	Parking										
	New Construction	72,000	72,000	111,000	111,000	132,000	132,000	171,000	171,000	171,000	171,000
	Atrium				5,000		4,000		5,000	4,000	9,000
	Total GSF	490,400	490,400	524,550	512,550	553,100	553,100	576,300	576,300	576,300	576,300
	* Alternates for options A1, B1 & C1, replacing Residential GSF										

DEVELOPMENT  
OPTION  
CONCEPTS

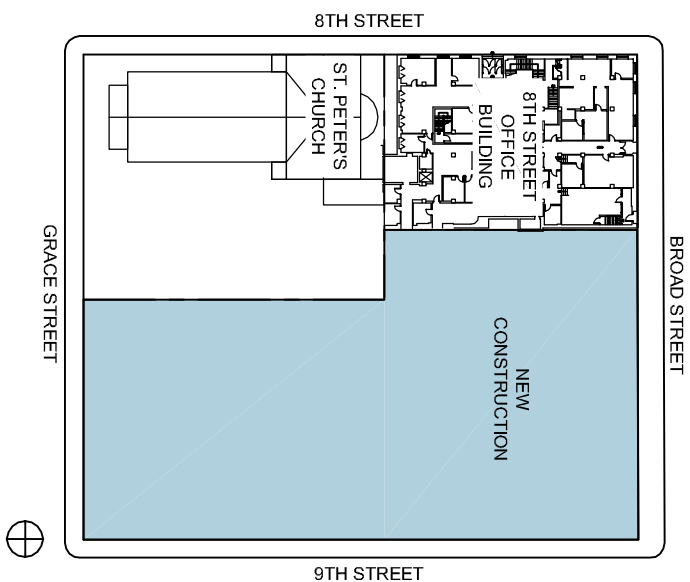
OPTION A



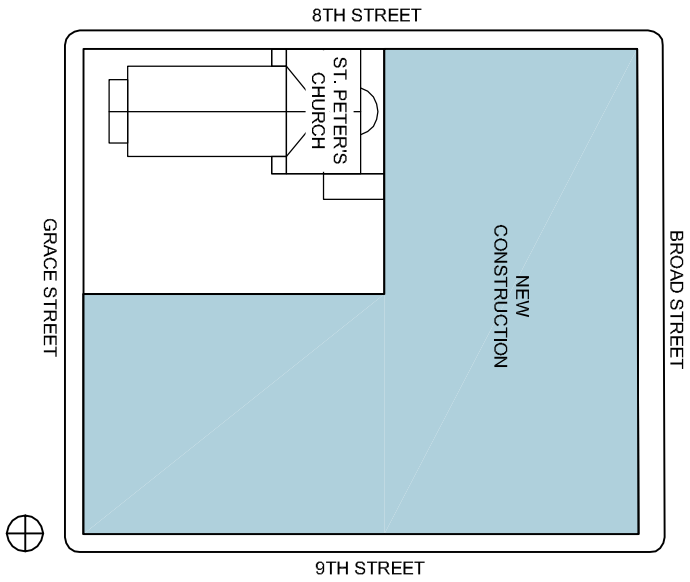
OPTION B



OPTION C



OPTION D



**Development Option A: Retention of the 8th and 9th Street Office Buildings with a new structure on the corner of 9th and Broad Streets**

**Option A** retains both of the existing buildings. The 8th Street Building and the 9th Street Building are used for offices. A new building is constructed at the empty corner site as offices. Each existing building could be connected to the new building at the first floor and selected upper floors where the floor levels align.

In **Option A1**, the 8th Street Building is leased or sold for use as apartments or a hotel.

The scale of the new construction is roughly in keeping with the scale of surrounding structures, but shorter than the 8th Street Building. A total of approximately 500,000 gross square feet is provided, including 72,000 gsf of parking. Of this area, approximately 360,000 net square feet of office space is provided, of which 137,000 is provided by new construction. In Option A1, the use of the 8th Street Office Building as residential or hotel would reduce the total net square footage of office to 260,000.

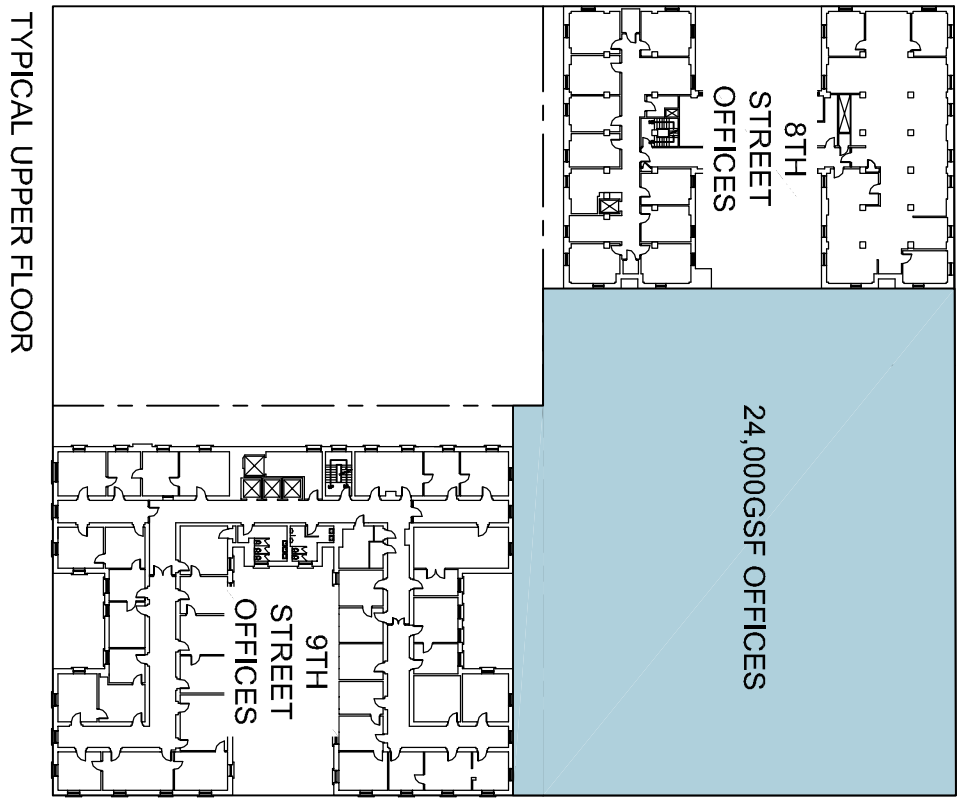
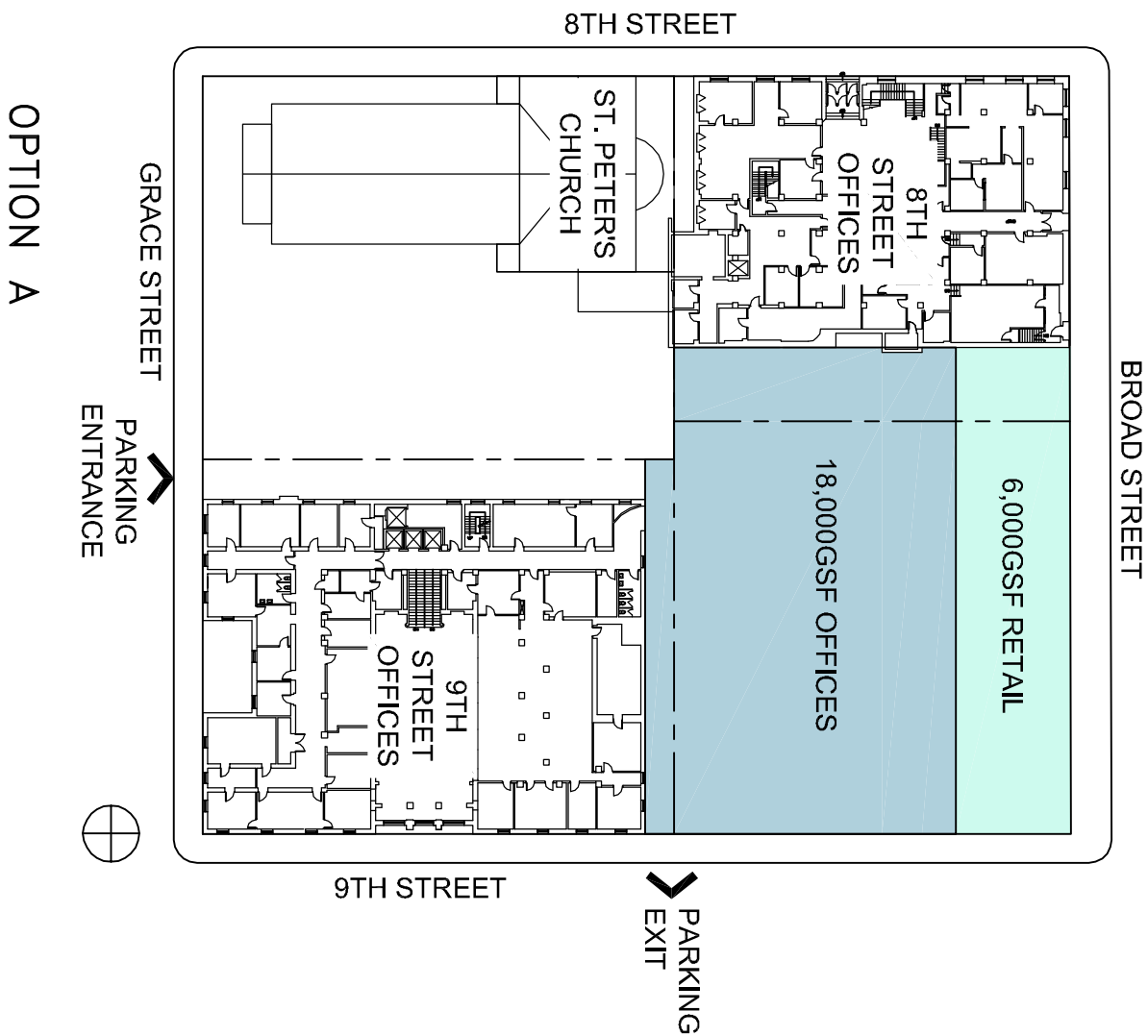
The actual configuration of the new construction could be varied, based of further development of design parameters. Use of floor area bonuses, dependent upon design decisions, could be used to further increase the floor area of the new construction.

The scheme gives continuity to the street wall along both Broad and 9th Streets. Through careful architectural expression of the new construction, a new unified complex could be developed that is in keeping with the goals of the Capitol Master Plan. Approximately 6,000 square feet of retail space is accommodated along Broad Street. Retail could be expanded further through the use of the first floor of the 8th Street Office Building, if desired, and if market demand was sufficient.

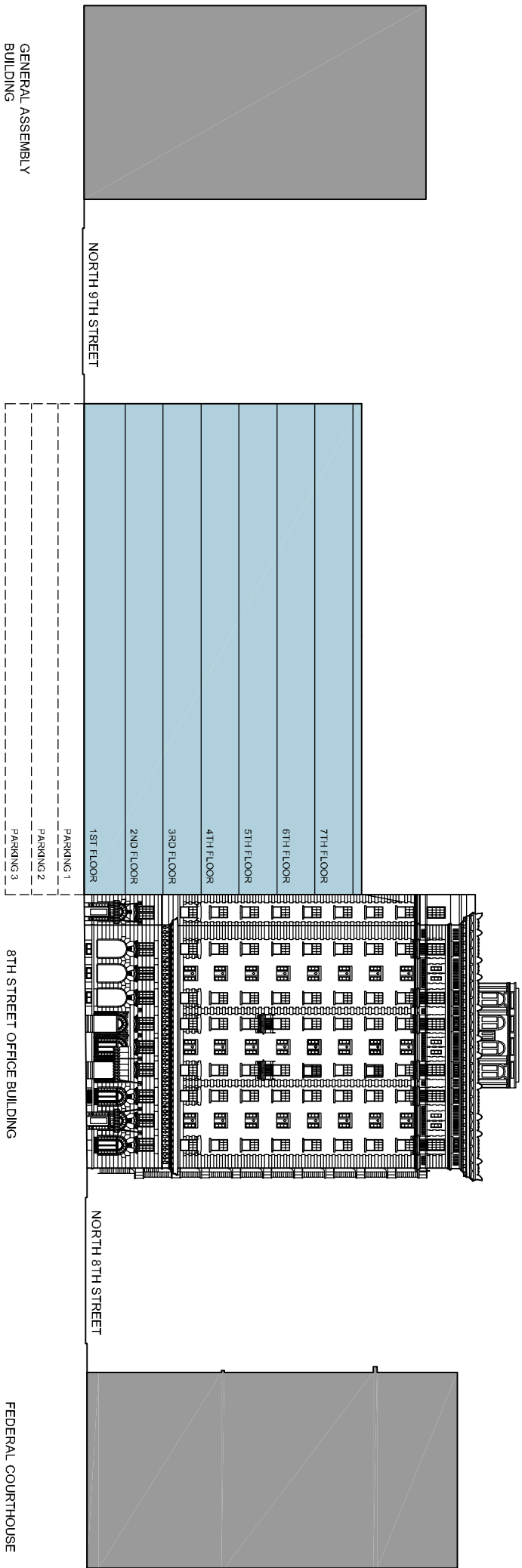
Three levels of below-grade parking, accommodating approximately 160 cars, are provided. Access is provided from Grace Street. The parking exit could be located along 9th Street or, if negotiations were successful with St. Peter's Church, along Grace Street. It is questionable whether having a parking exit directly onto 9th Street facing the Square is appropriate. Loading docks would be problematic due to the limited, and highly visible, street frontage.

One advantage of this option is that it minimizes the impact of the new construction on St. Peter's Church. Special care would still be required to remediate any vibration that could damage the structure or stained glass of both St. Peter's and St. Paul's Churches.

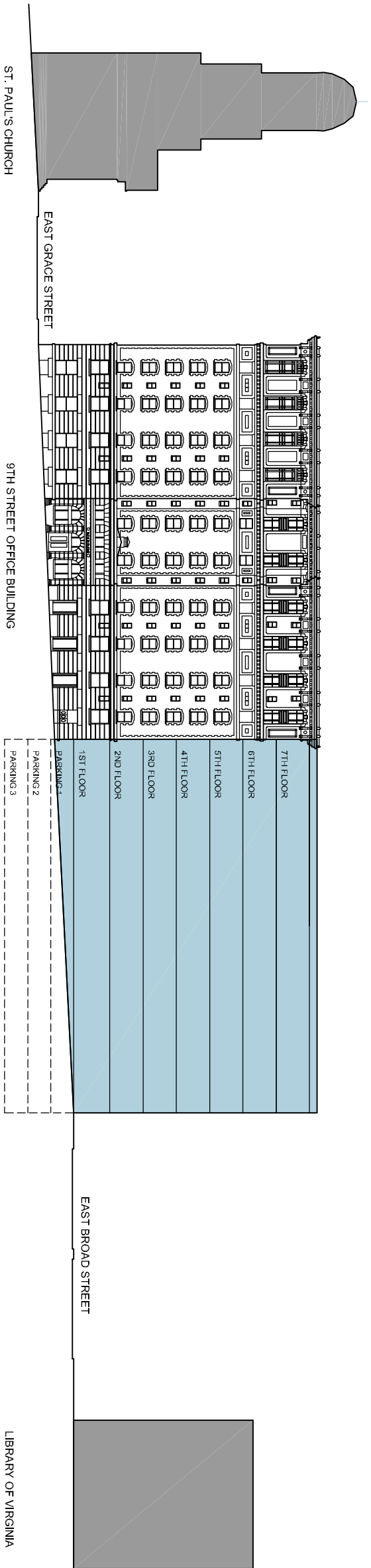
It would be possible to implement this option in a phased manner that would allow the continued occupancy of the 9th Street Office Building during construction of the new building, and renovation or adaptive reuse of the 8th Street Building. Together, 8th Street and the new building could accommodate the occupants of the General Assembly Building [GAB] during its renovation. After the GAB renovation is completed, the occupants of 9th Street could then move to the new and/or renovated buildings to allow renovation of the remaining space.



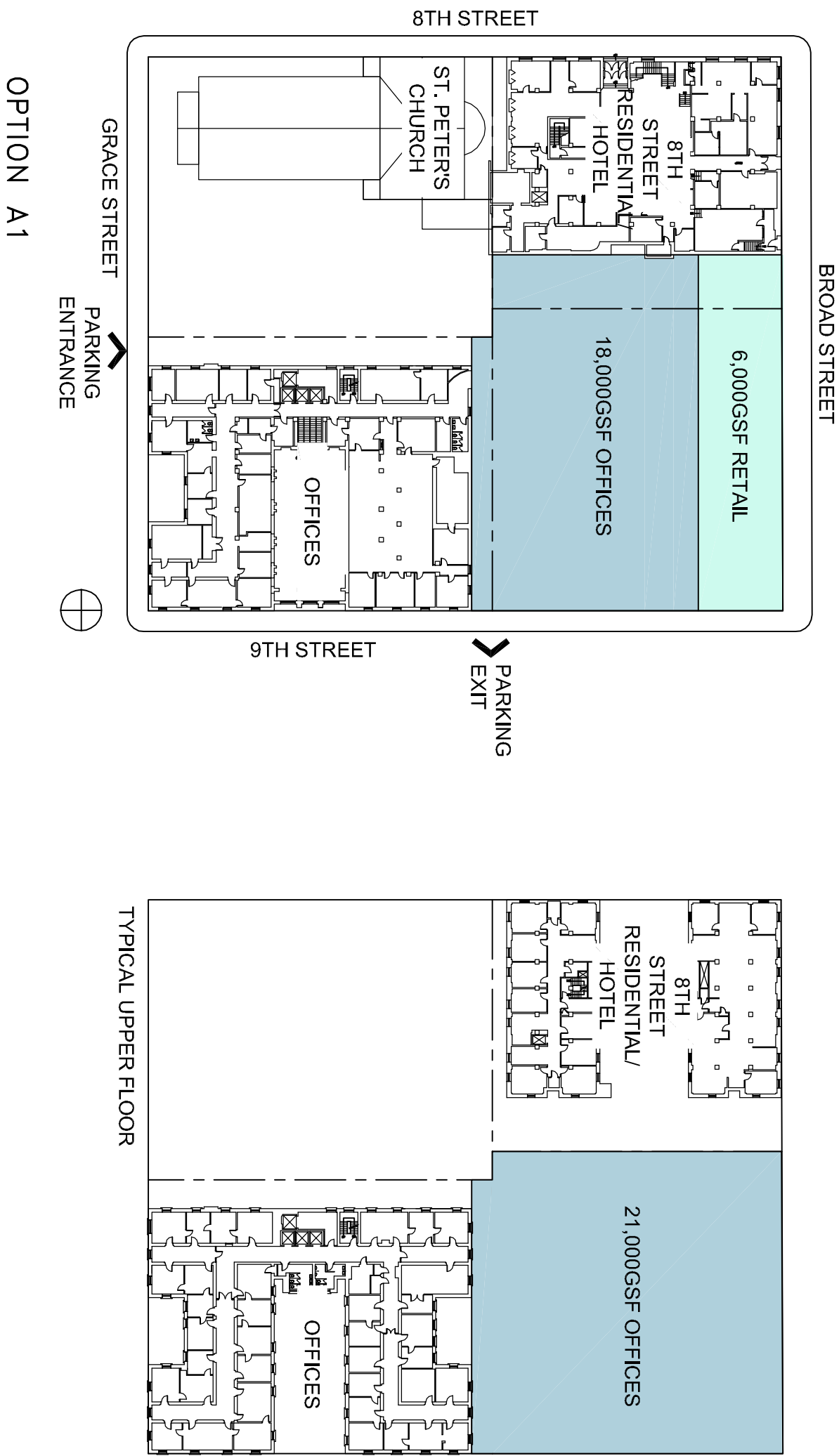


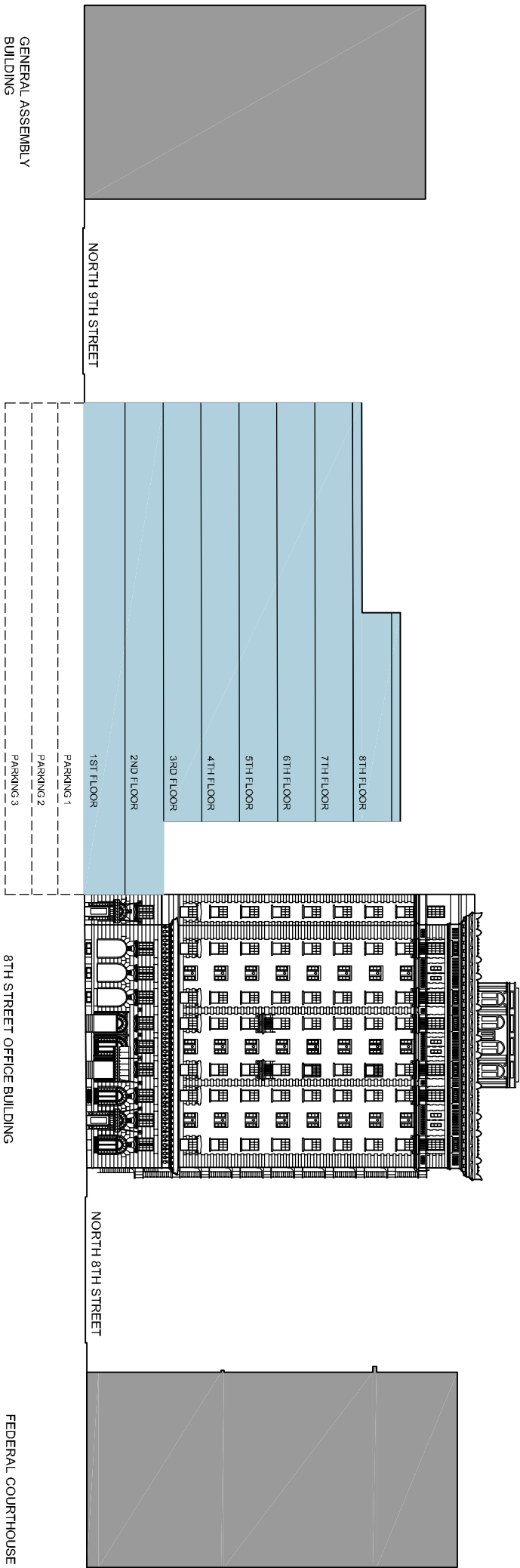


OPTION A BROAD STREET ELEVATION

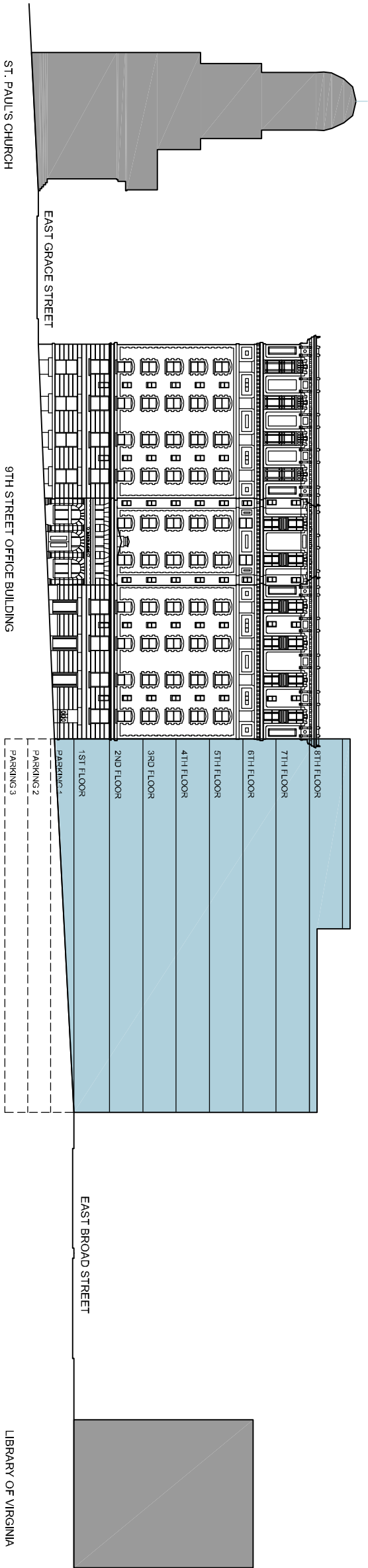


OPTION A 9TH STREET ELEVATION

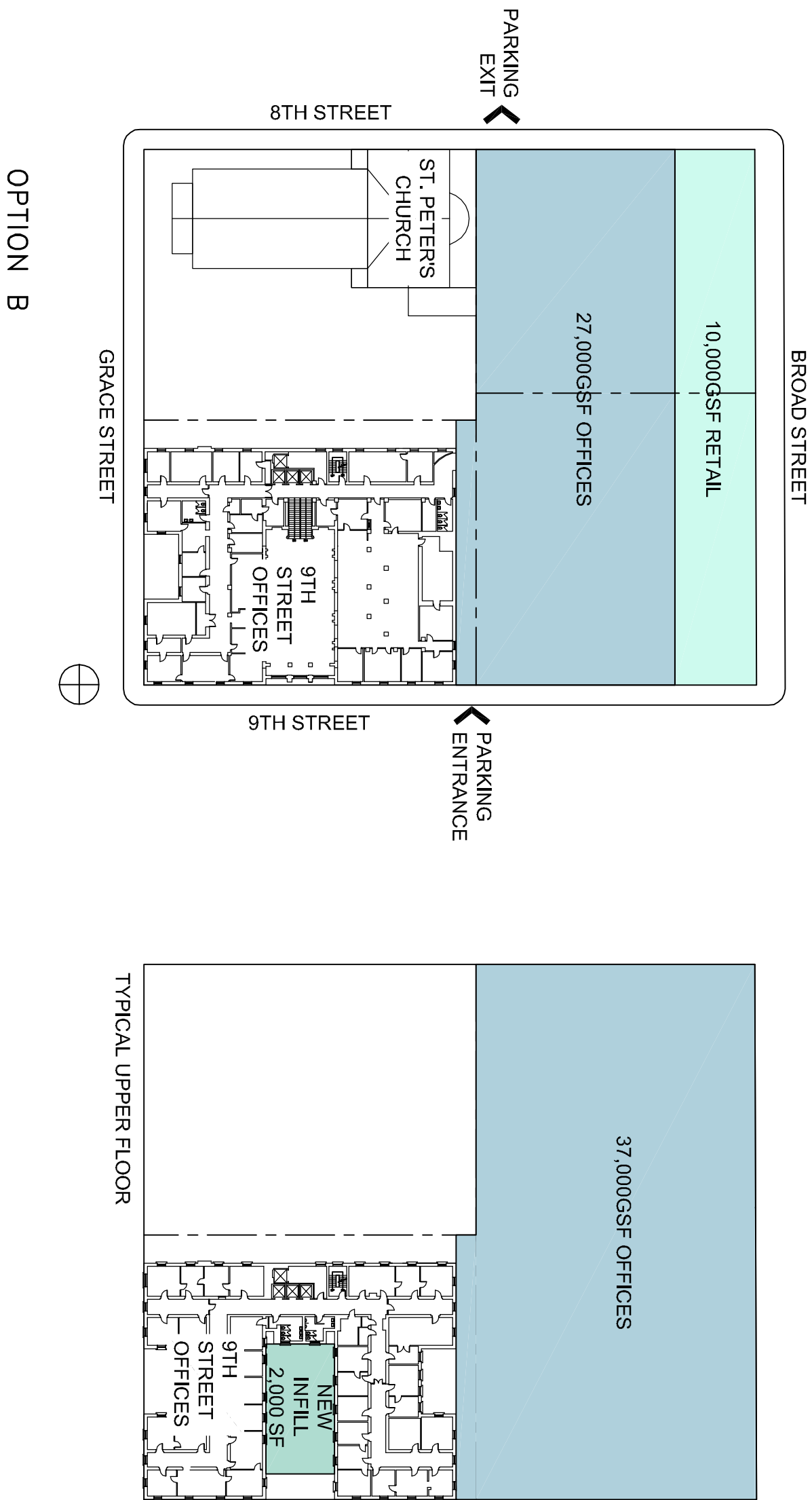


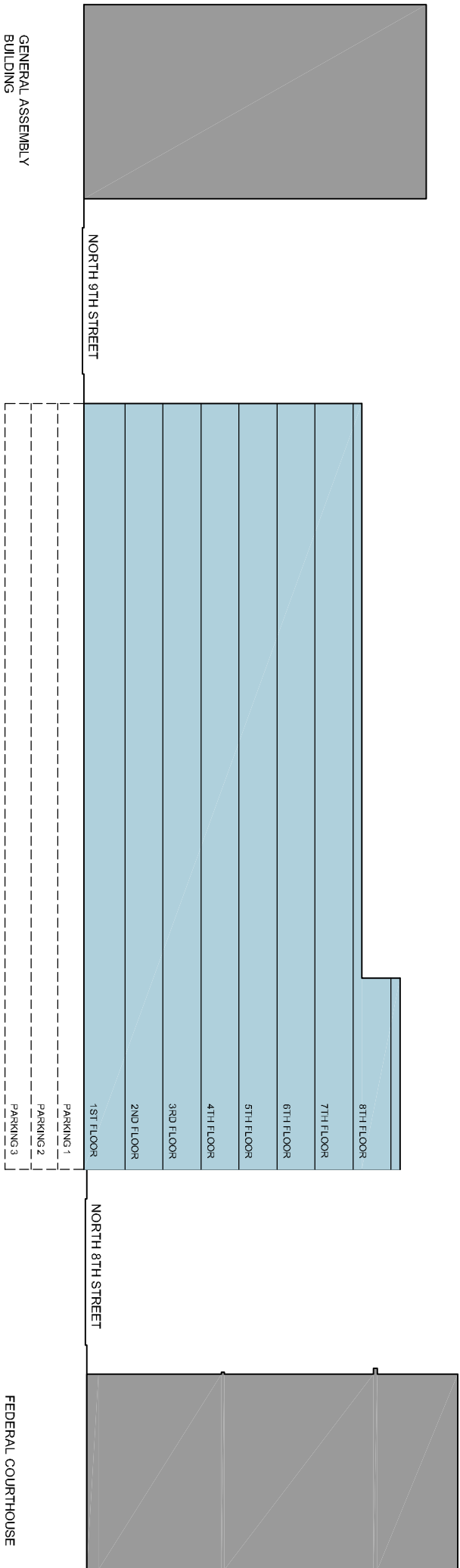


OPTION A1 BROAD STEET ELEVATION

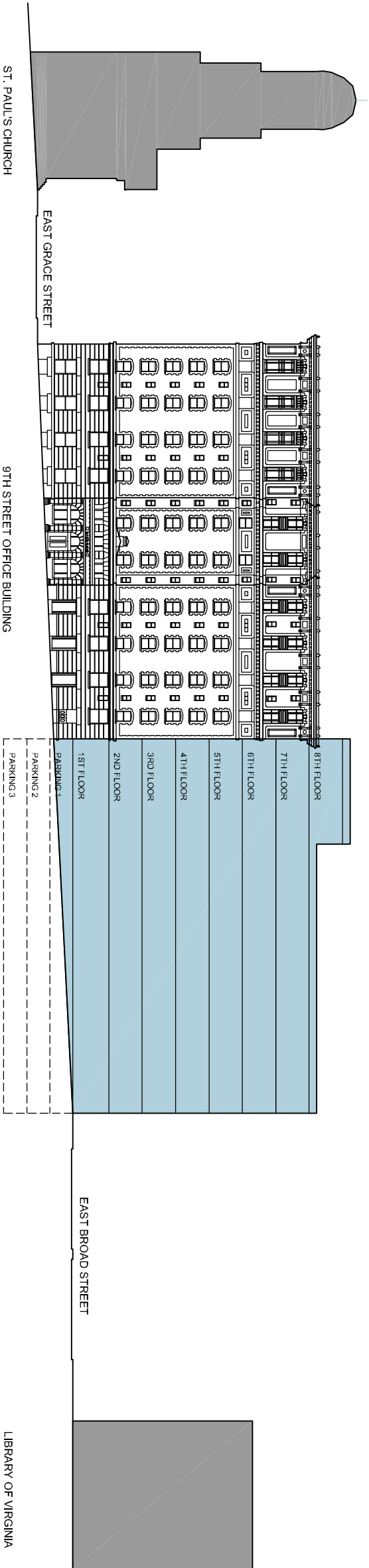


OPTION A1 9TH STREET ELEVATION





OPTION B BROAD STREET ELEVATION



OPTION B 9TH STREET ELEVATION



**Development Option B: Retention of the 9th Street Office Building with a new structure along Broad Street**

**Option B** retains the 9th Street Building as offices and provides for a new structure on the site of the 8th Street Building and the parking lot for additional offices. The 9th Street Building could be connected to the new building at the first floor and selected upper floors where the floor levels align.

In **Option B1**, the 9th Street Building is leased or sold for use as apartments or a hotel. Additionally, the façade of the 8th Street Building is retained and integrated with the construction of the new building behind.

The scale of the new construction is roughly in keeping with the scale of surrounding structures. A total of approximately 536,000 gross square feet is provided, including 111,000 gsf of parking. Of this area, approximately 350,000 net square feet of office space is provided, of which 210,000 is provided by new construction. In Option B1, the use of the 9th Street Office Building as residential or hotel would reduce the total net square footage of office to 213,000.

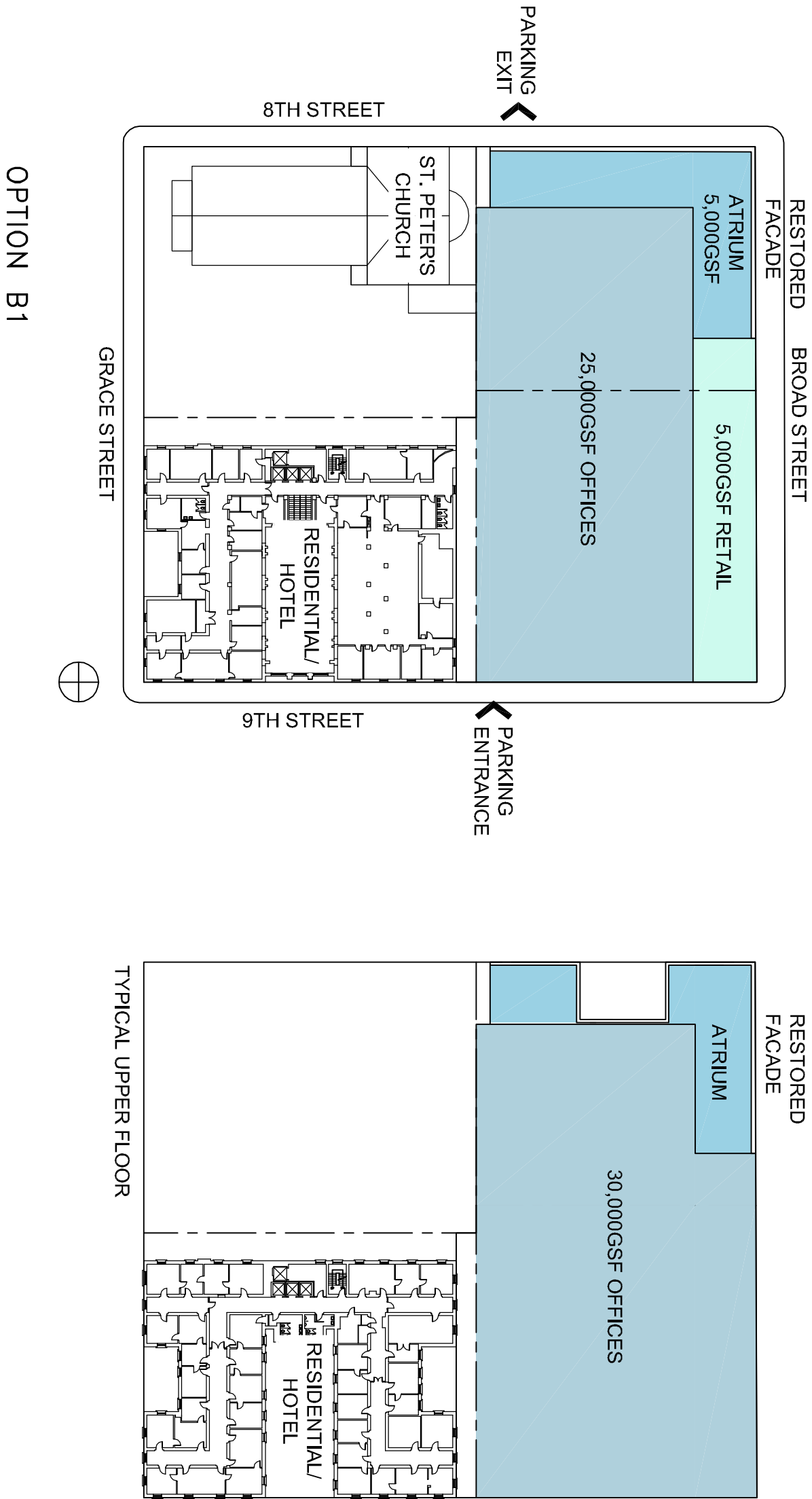
The actual configuration of the new construction could be varied, based of further development of design parameters. Use of floor area bonuses, dependent upon design decisions, could be used to further increase the floor area of the new construction.

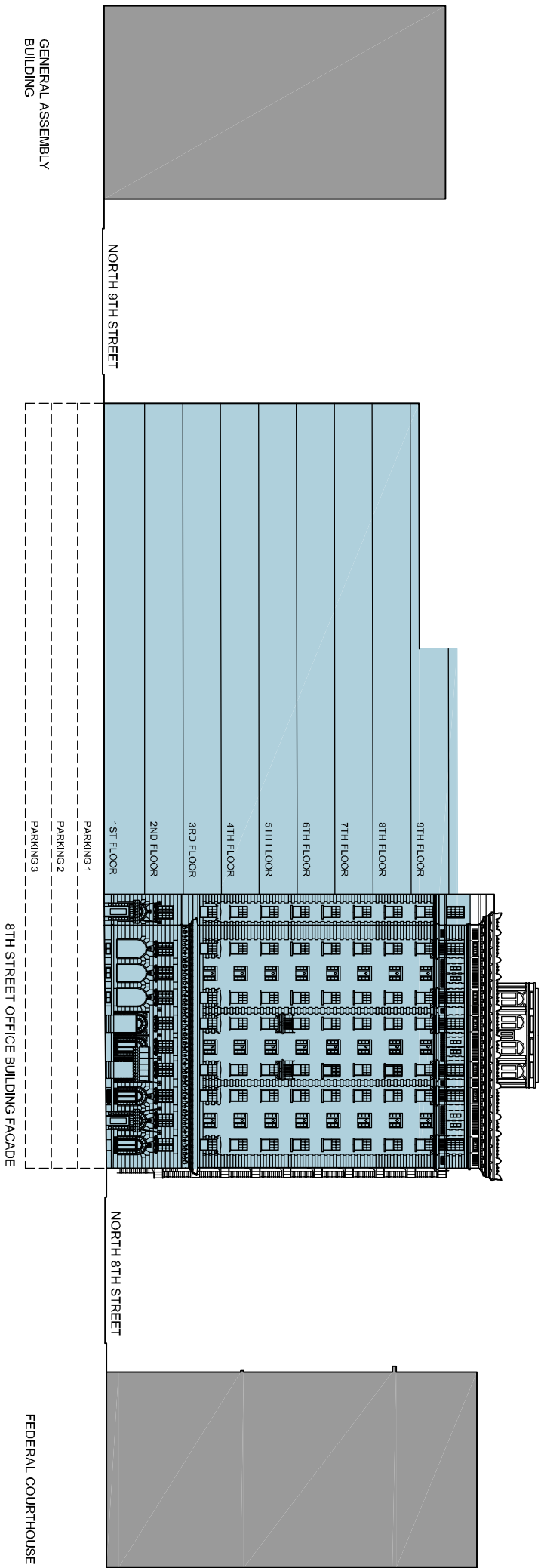
The scheme gives continuity to the street wall along both Broad and 9th Streets. Through careful architectural expression of the new construction, a new unified complex could be developed that is in keeping with the goals of the Capitol Master Plan. 5-10,000 square feet of retail space is accommodated along Broad Street.

Three levels of below-grade parking, accommodating approximately 270 cars, are provided. Access is provided from Grace Street. The parking exit could be located along 9th Street or, if negotiation were successful with St. Peter's Church, along Grace Street. It is questionable whether having a parking exit directly onto 9th Street facing the Square is appropriate.

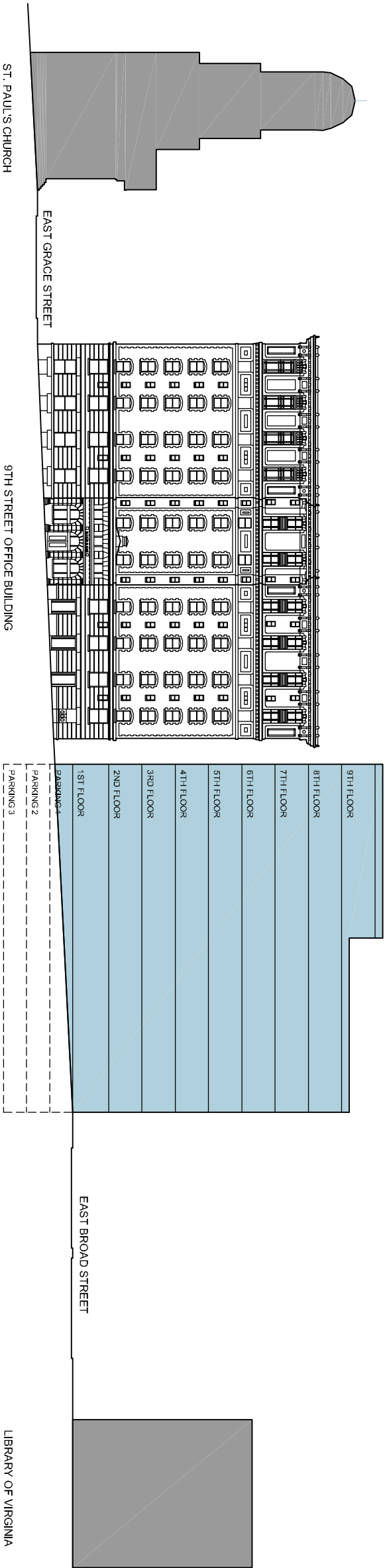
One concern of this option is impact of the new construction on St. Peter's Church. Underpinning of the existing church foundations would be required. Special care would be required to remediate any vibration that could damage the structure or stained glass of both St. Peter's and St. Paul's Churches.

It would be possible to implement this option in a phased manner that would allow the continued occupancy of the 9th Street Office Building during construction of the new building. The new building could accommodate the occupants of the General Assembly Building during its renovation. After the GAB is completed, occupants of 9th Street could then move to the new building to allow renovation of the remaining space.

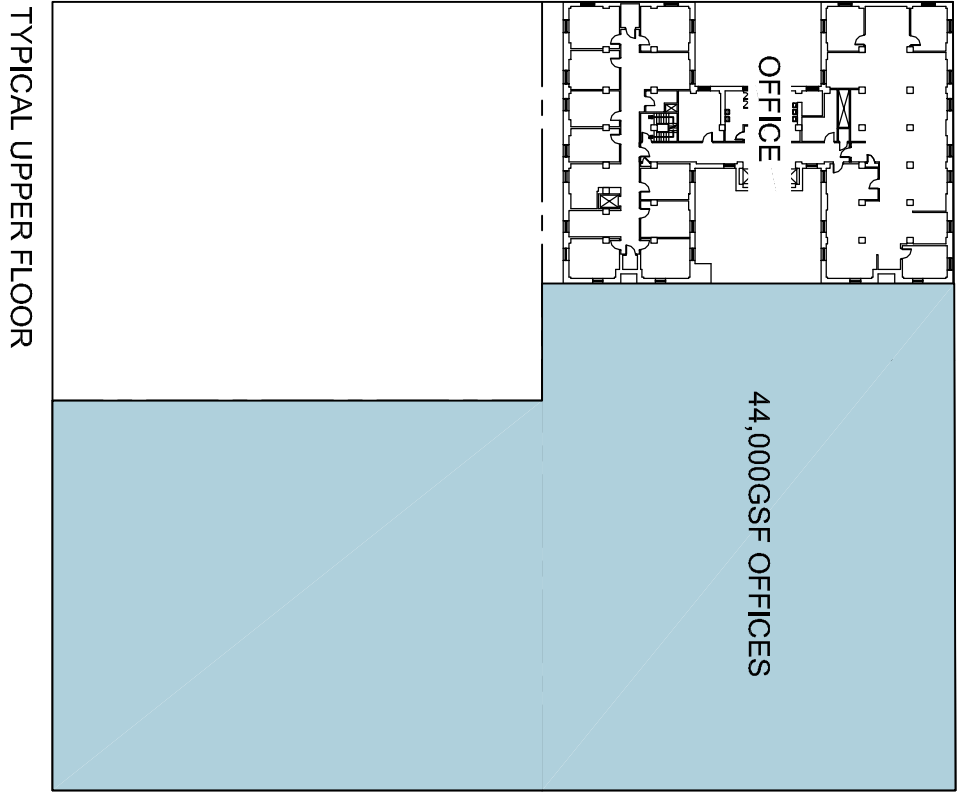
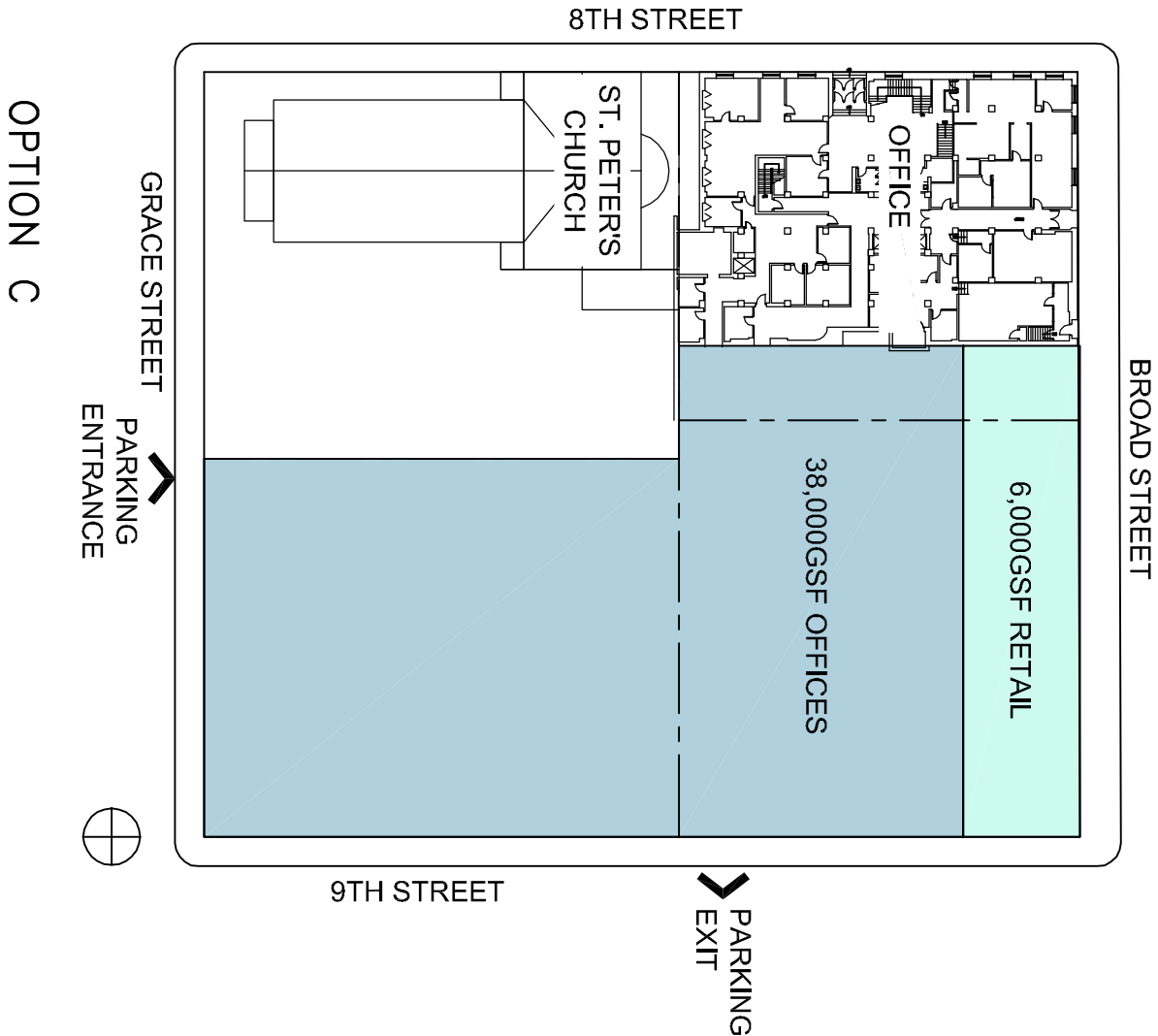


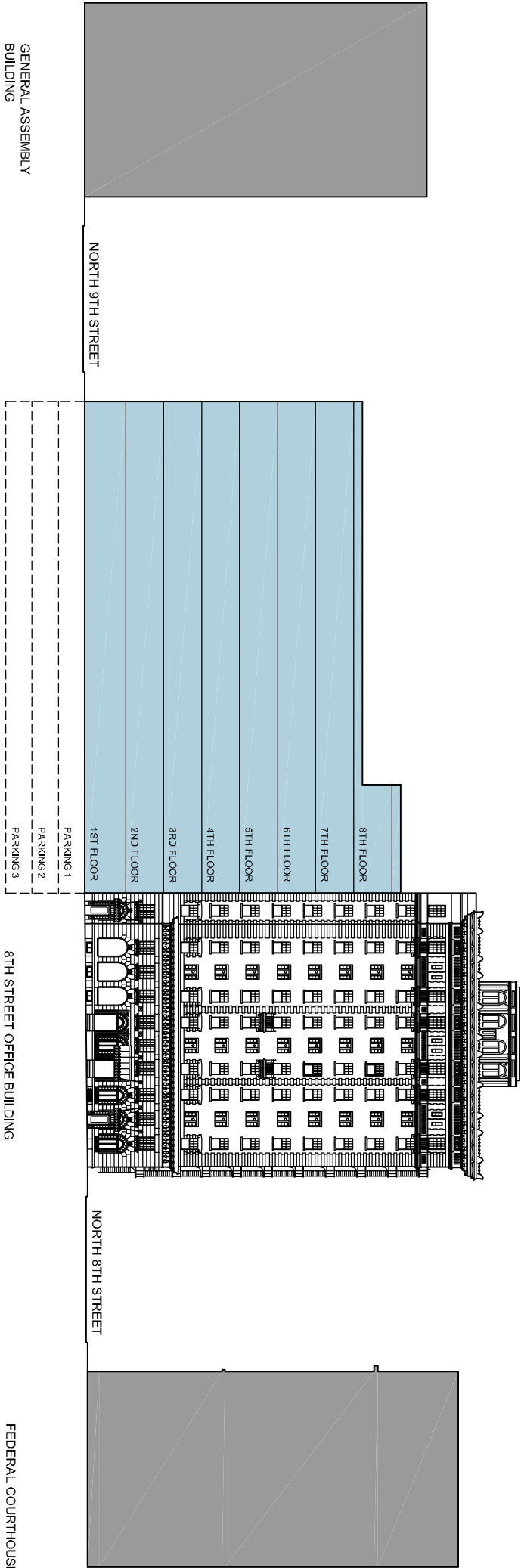


OPTION B1 BROAD STREET ELEVATION

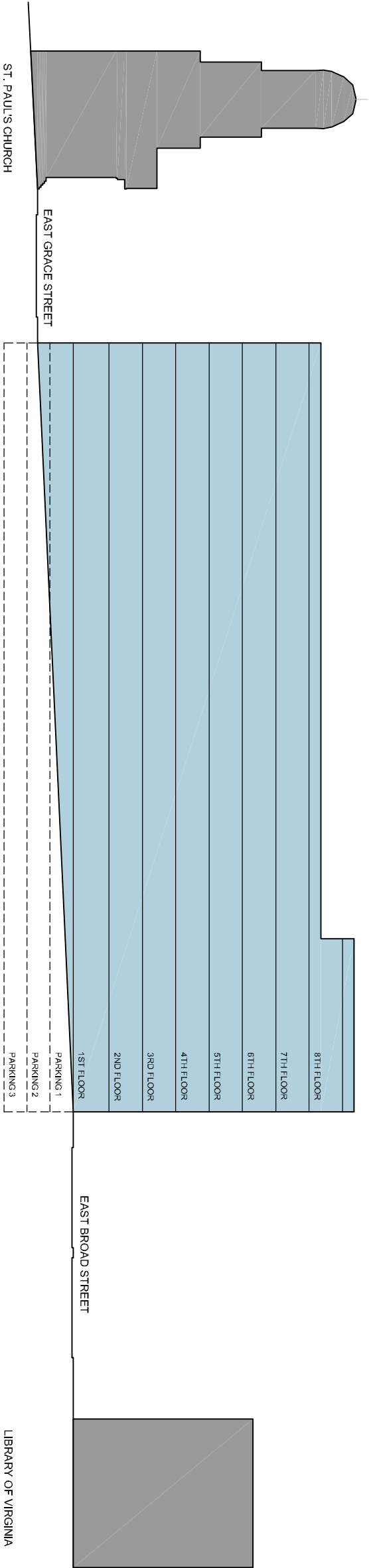


OPTION B1 9TH STREET ELEVATION



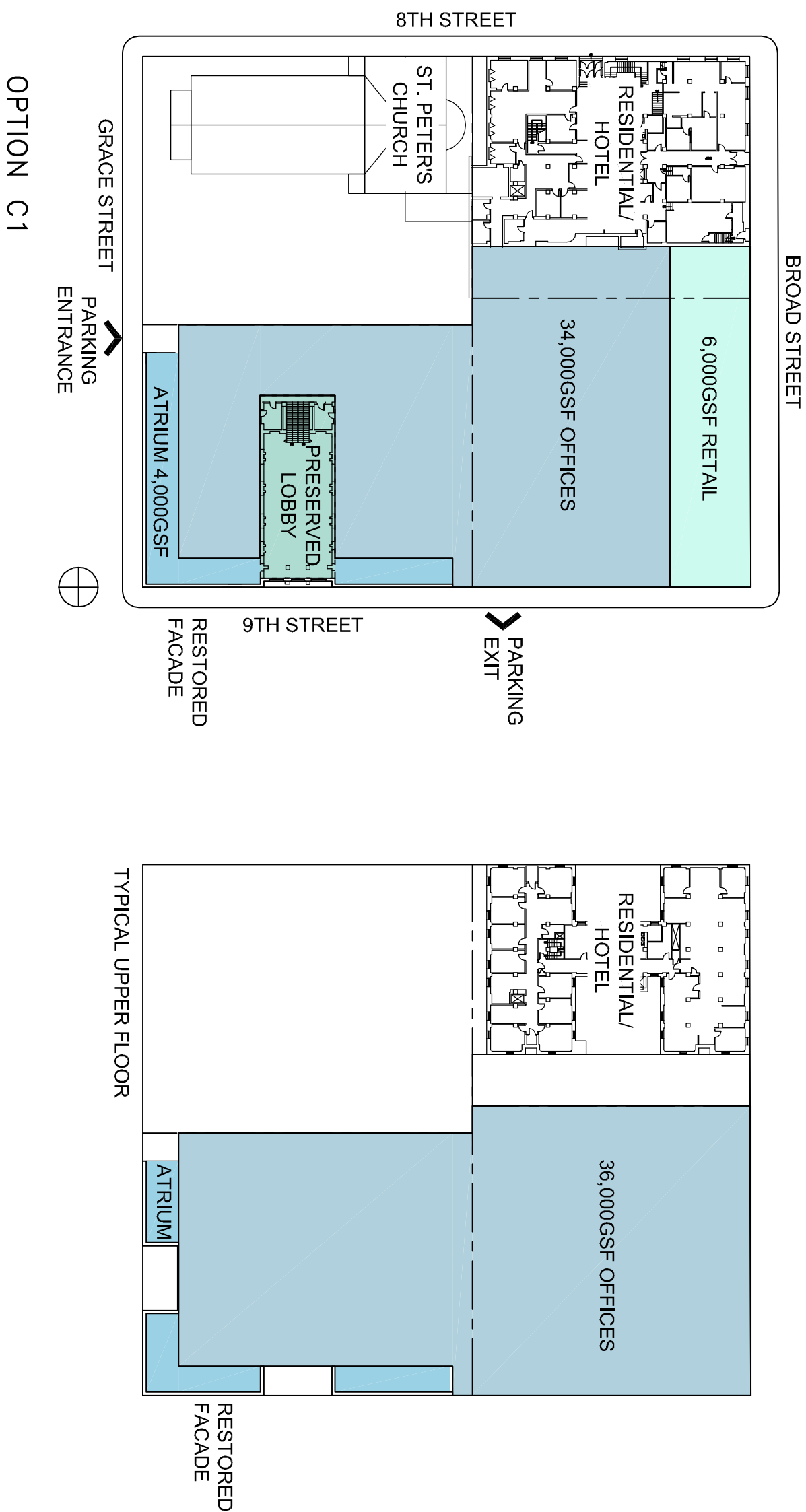


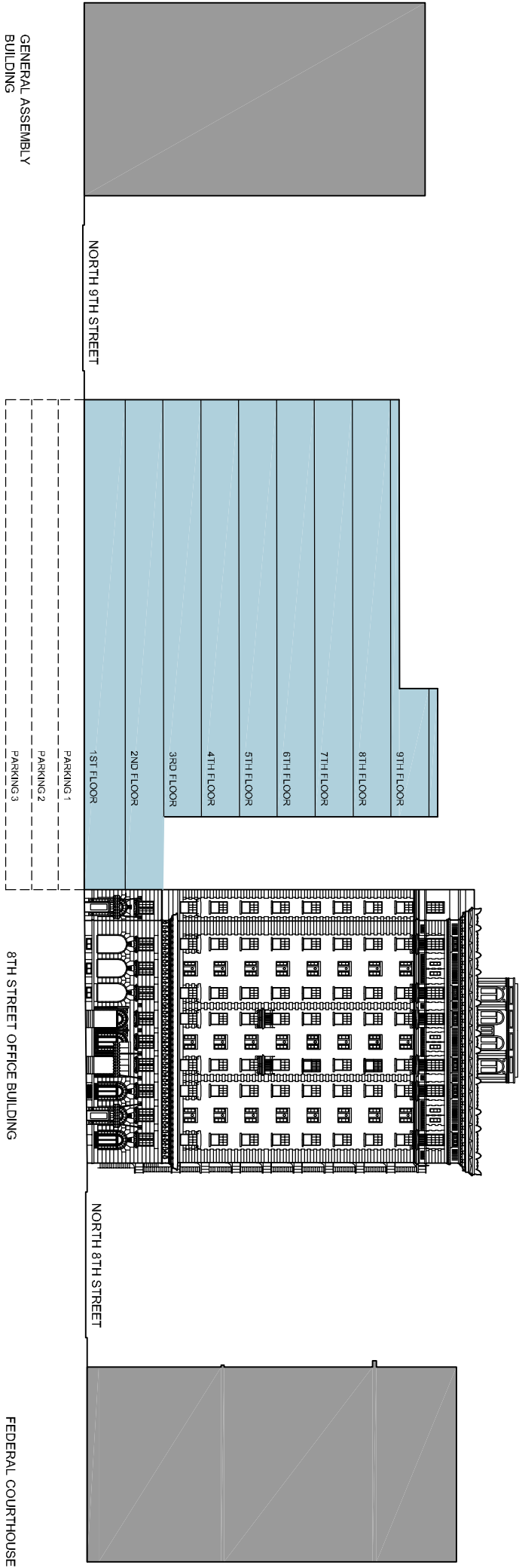
OPTION C BROAD STREET ELEVATION



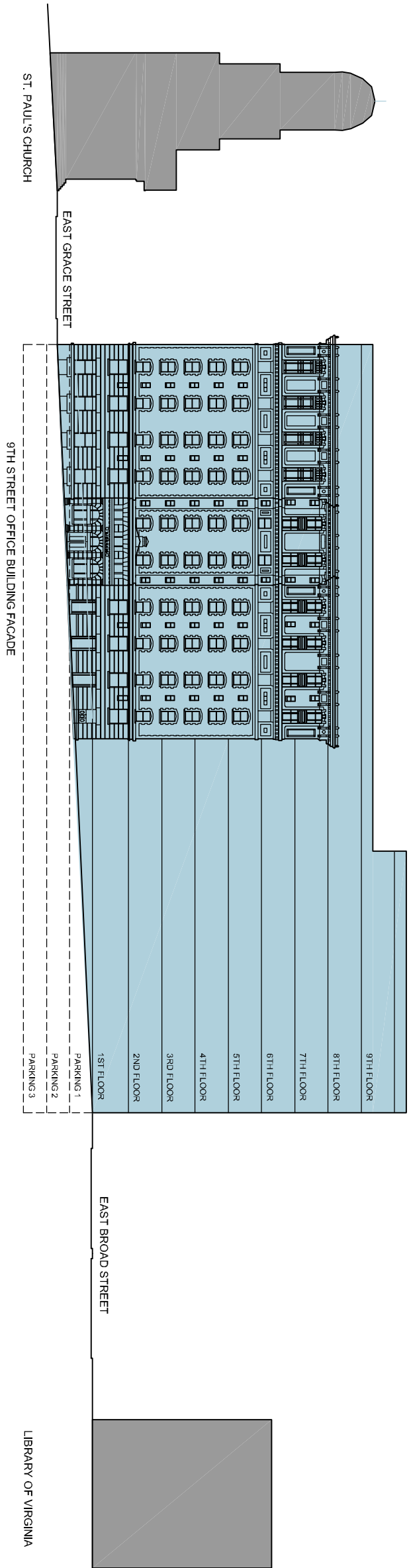
OPTION C 9TH STREET ELEVATION







OPTION C1 BROAD STREET ELEVATION



OPTION C1 9TH STREET ELEVATION

**Development Option C: Retention of the 8th Street Office Building with a new structure along 9th Street**

**Option C** retains the 8th Street Building as offices and provides for a new structure on the site of the 9th Street Building and the parking lot for additional offices. The 8th Street Building could be connected to the new building at the first floor and selected upper floors where the floor levels align.

In **Option C1**, the 8th Street Building is leased or sold for use as apartments or a hotel. Additionally, the façade of the 9th Street Building is retained and integrated with the construction of the new building behind, as is the existing lobby.

The scale of the new construction is roughly in keeping with the scale of surrounding structures. A total of approximately 550,000 gross square feet is provided, including 132,000 gsf of parking. Of this area, approximately 350,000 net square feet of office space is provided, of which 255,000 is provided by new construction. In Option C1, the use of the 8th Street Office Building as residential or hotel would reduce the total net square footage of office to 255,000.

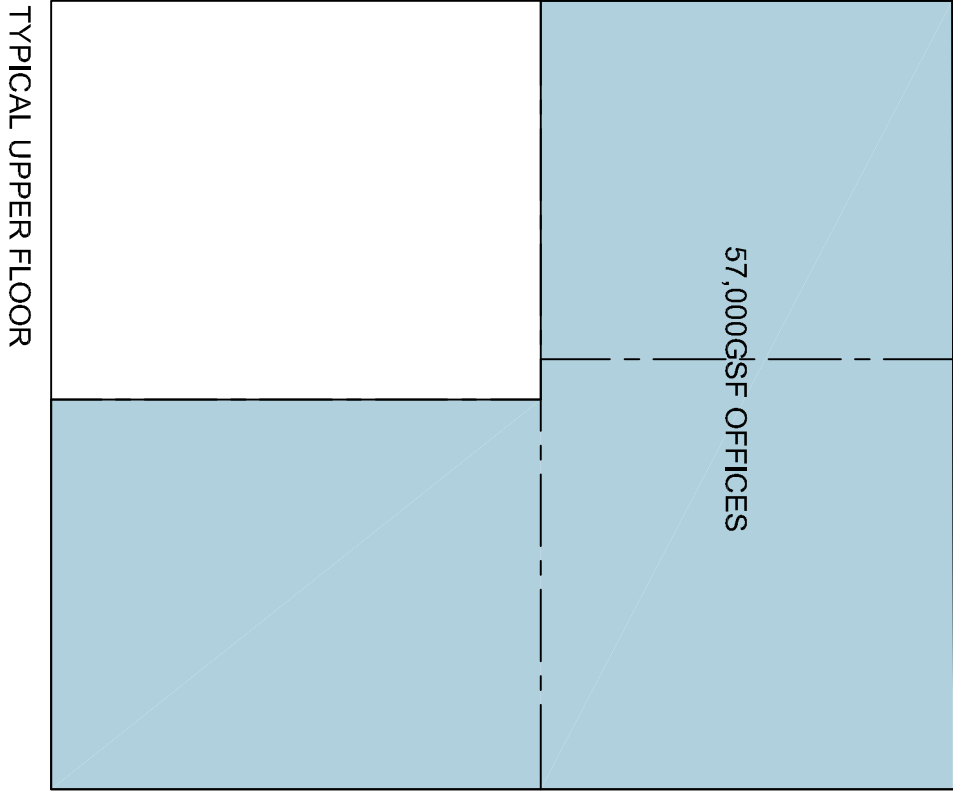
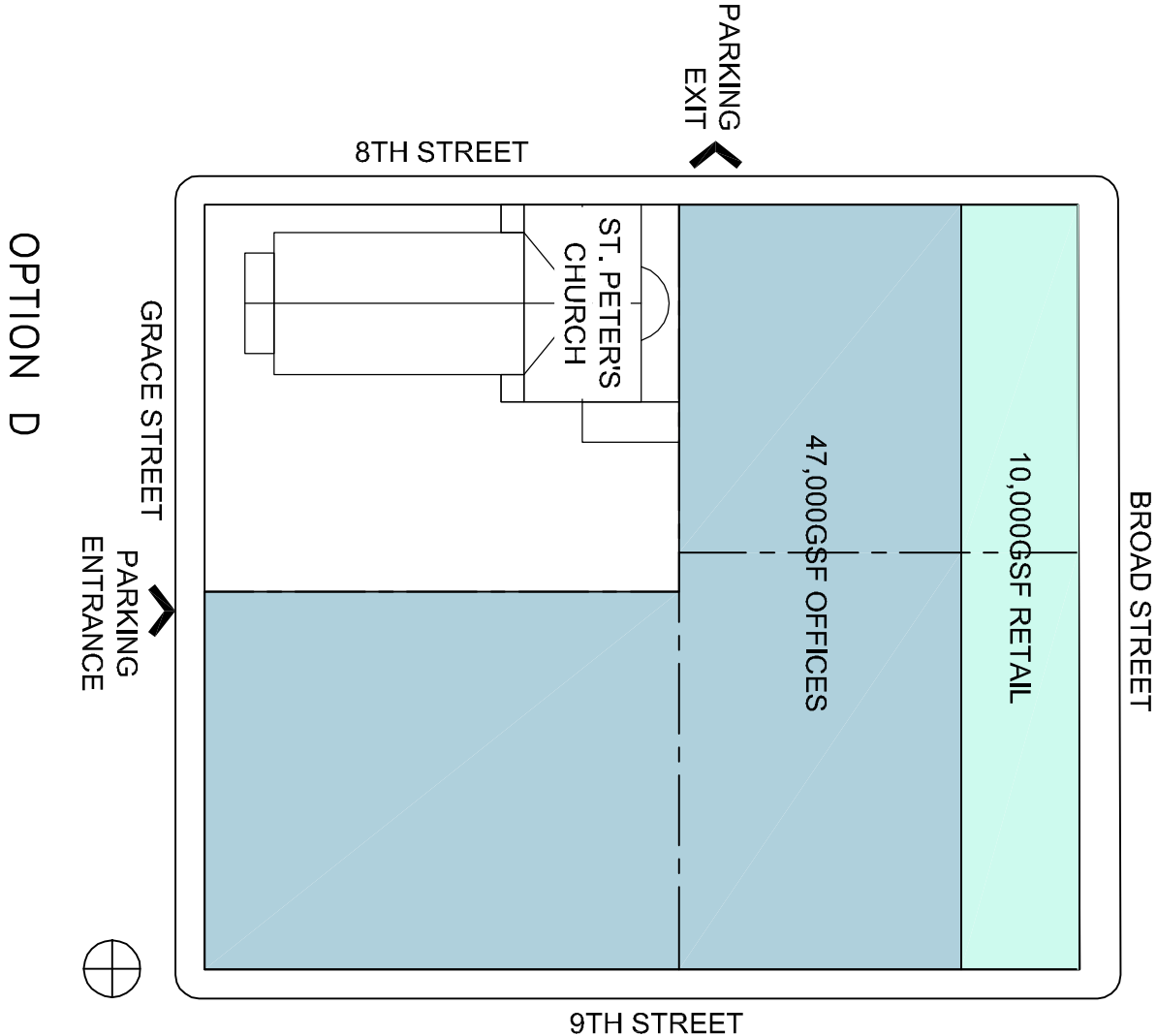
The actual configuration of the new construction could be varied, based of further development of design parameters. Use of floor area bonuses, dependent upon design decisions, could be used to further increase the floor area of the new construction.

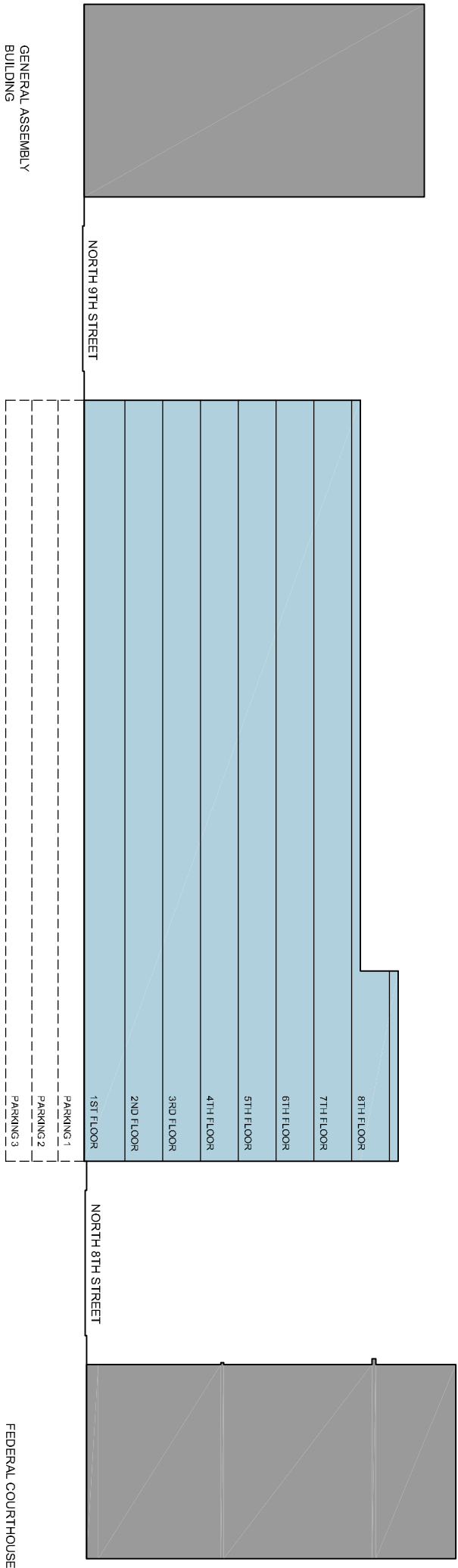
The scheme gives continuity to the street wall along both Broad and 9th Streets. Through careful architectural expression of the new construction, a new unified complex could be developed that is in keeping with the goals of the Capitol Master Plan. 6,000 square feet of retail space is accommodated along Broad Street.

Three levels of below-grade parking, accommodating approximately 320 cars, are provided. Access is provided from Grace Street. The parking exit could be located along 9th Street or, if negotiation were successful with St. Peter's Church, along Grace Street. It is questionable whether having a parking exit directly onto 9<sup>th</sup> Street facing the Square is appropriate.

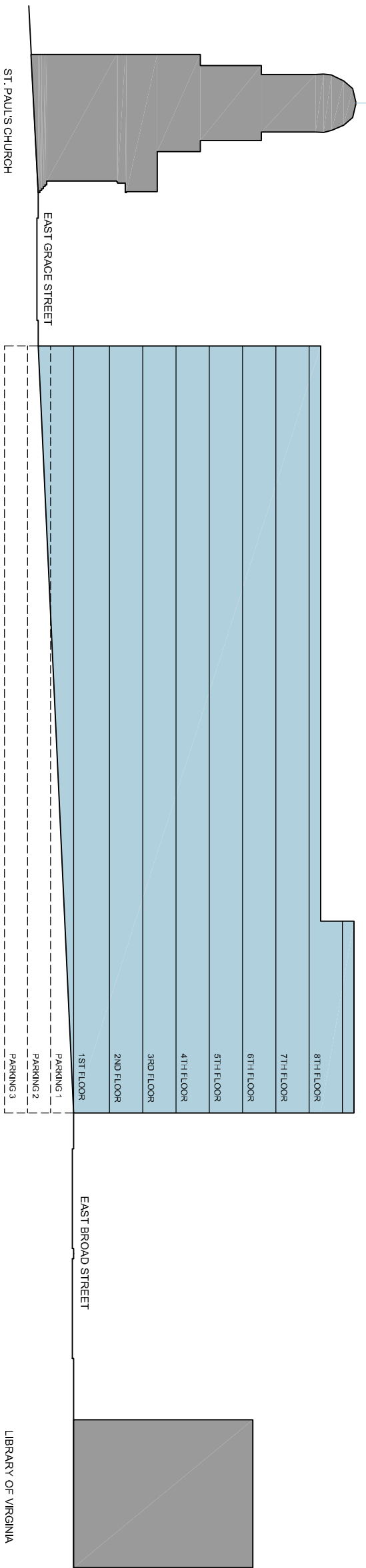
One concern of this option is the impact of the new construction on St. Peter's Church. Special care would be required to remediate any vibration that could damage the structure or stained glass of both St. Peter's and St. Paul's Churches.

The new building could accommodate the occupants of the General Assembly Building during its renovation. Since 8<sup>th</sup> Street has been vacated, it could easily be renovated as a second phase of the project, or undertaken concurrently with the new building.



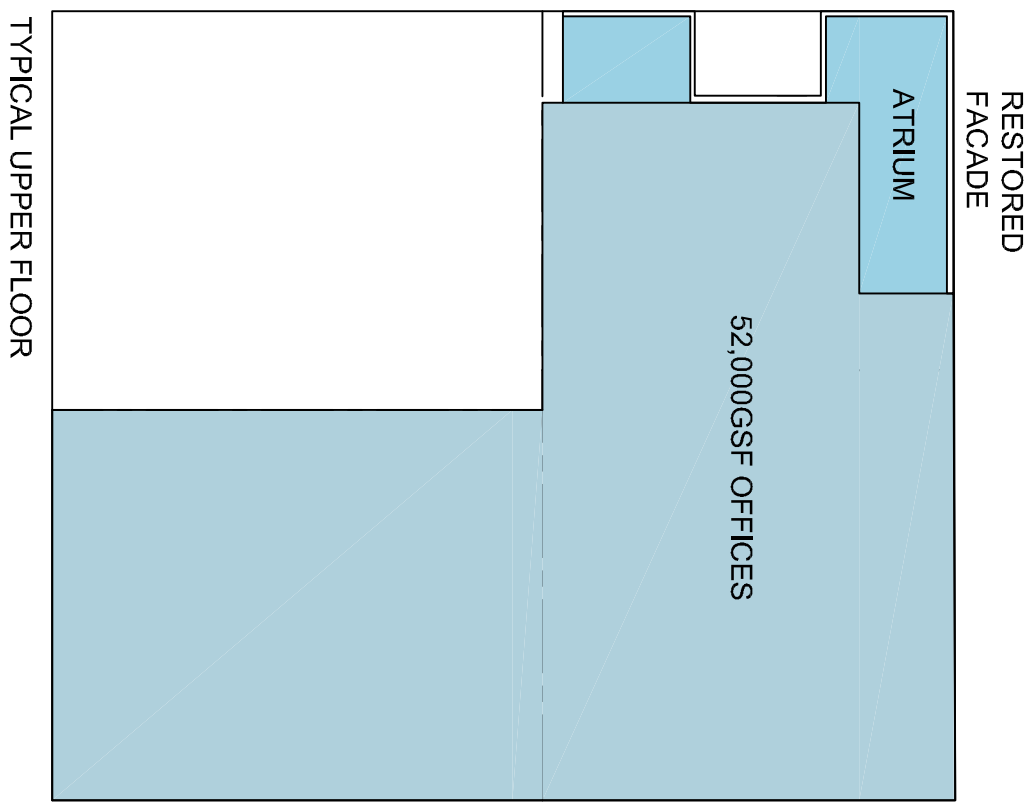
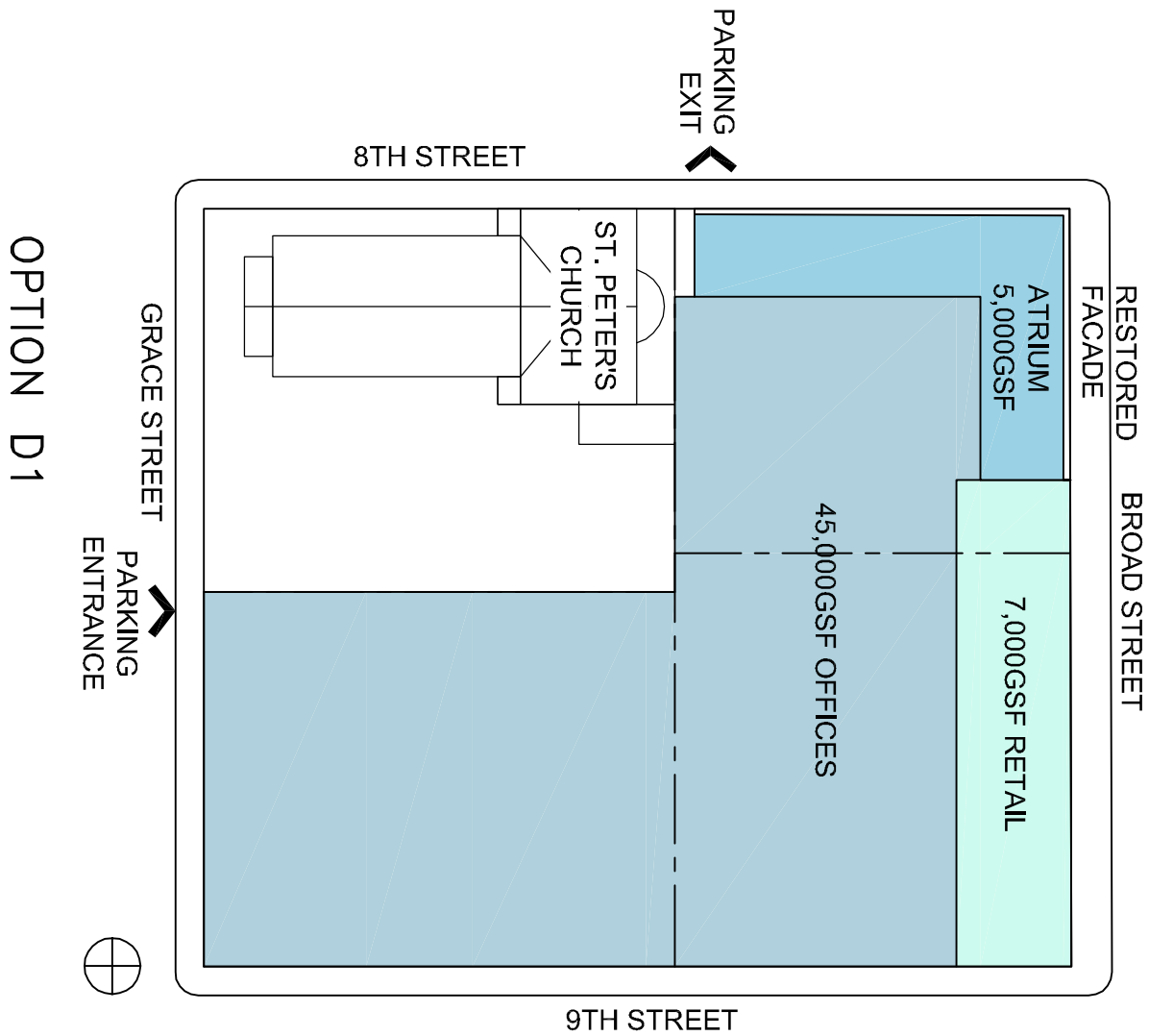


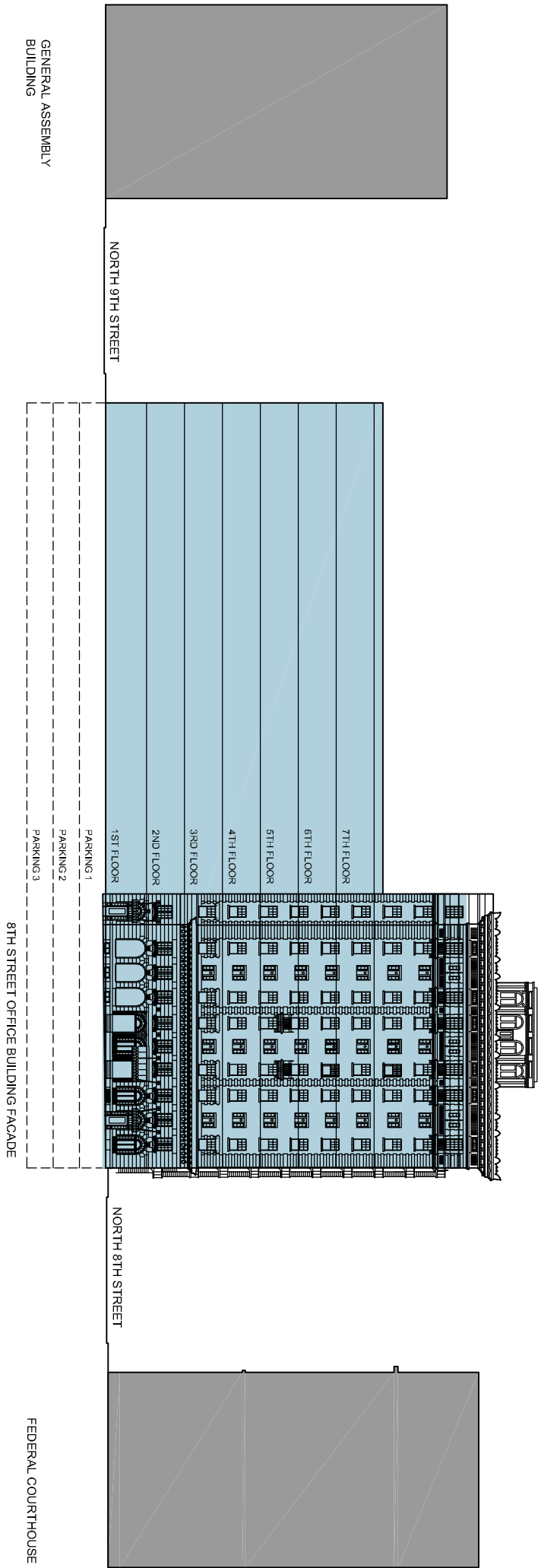
OPTION D BROAD STREET ELEVATION



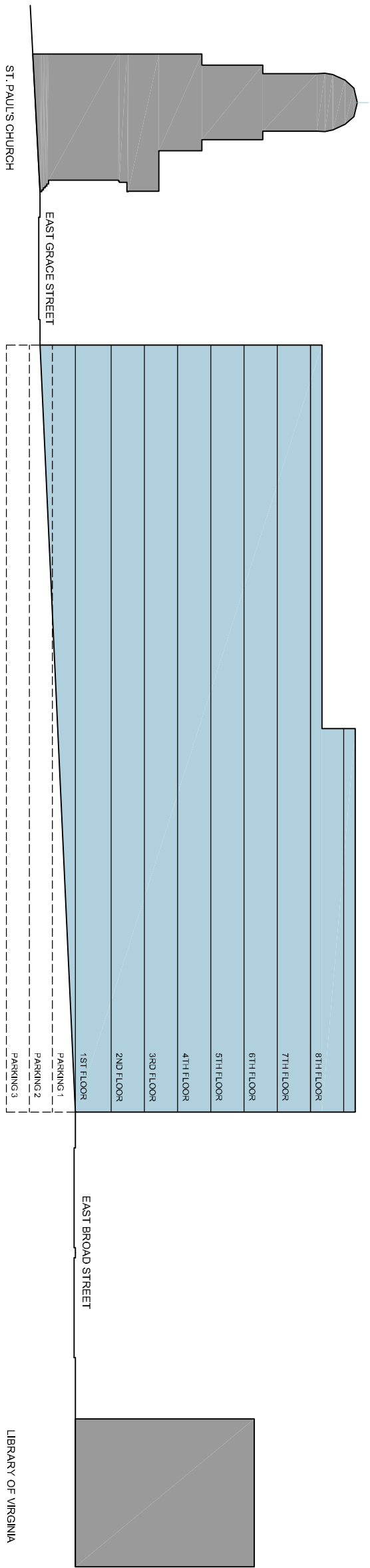
OPTION D 9TH STREET ELEVATION



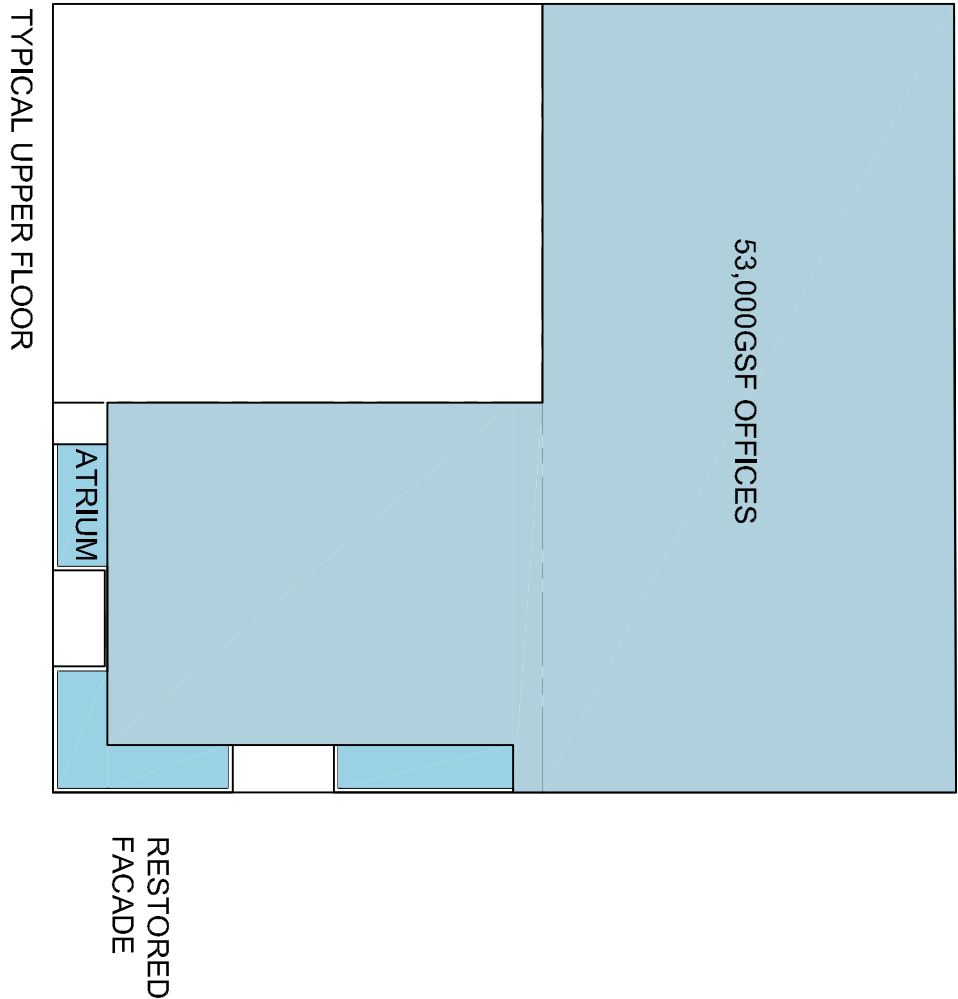
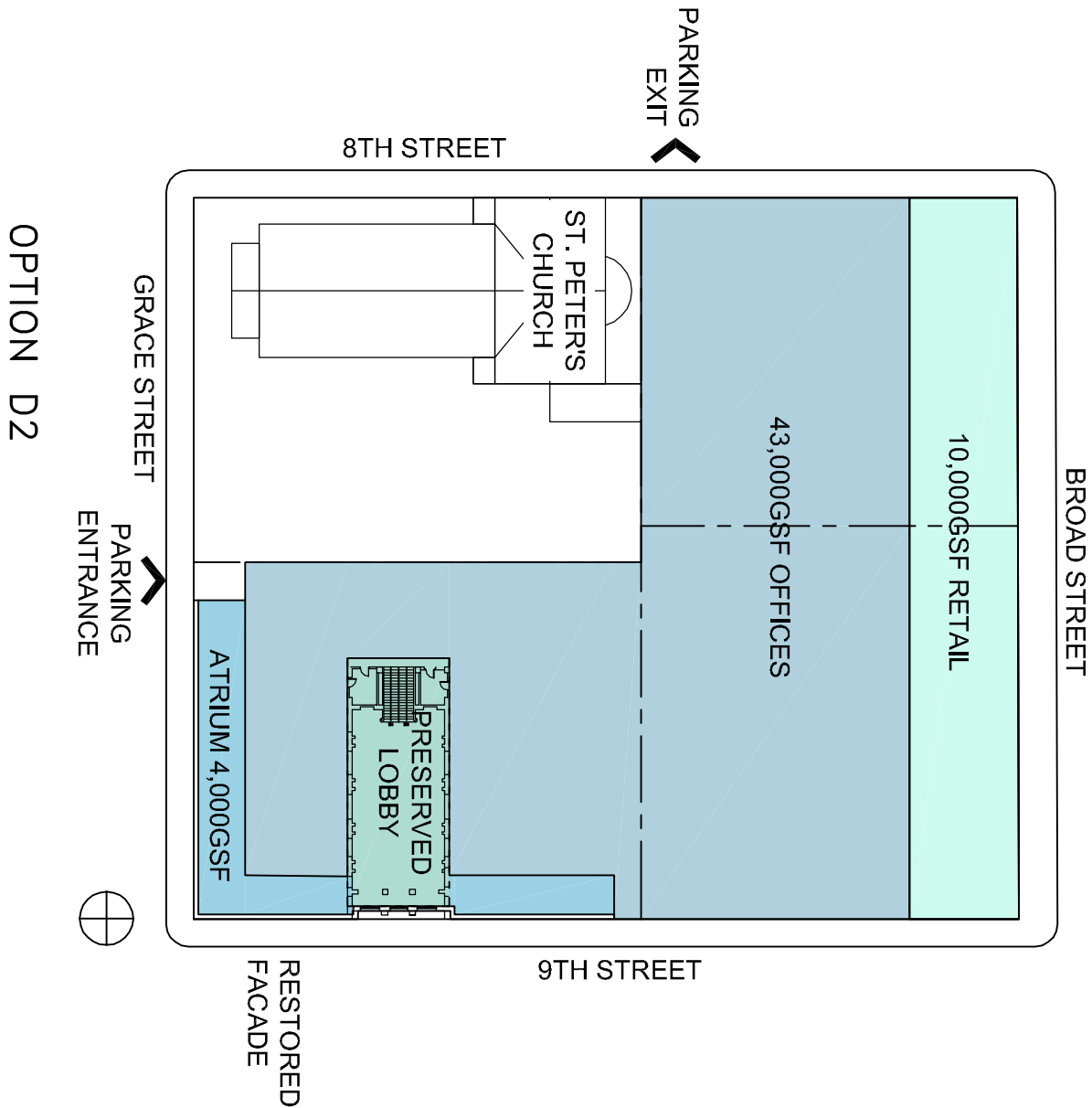


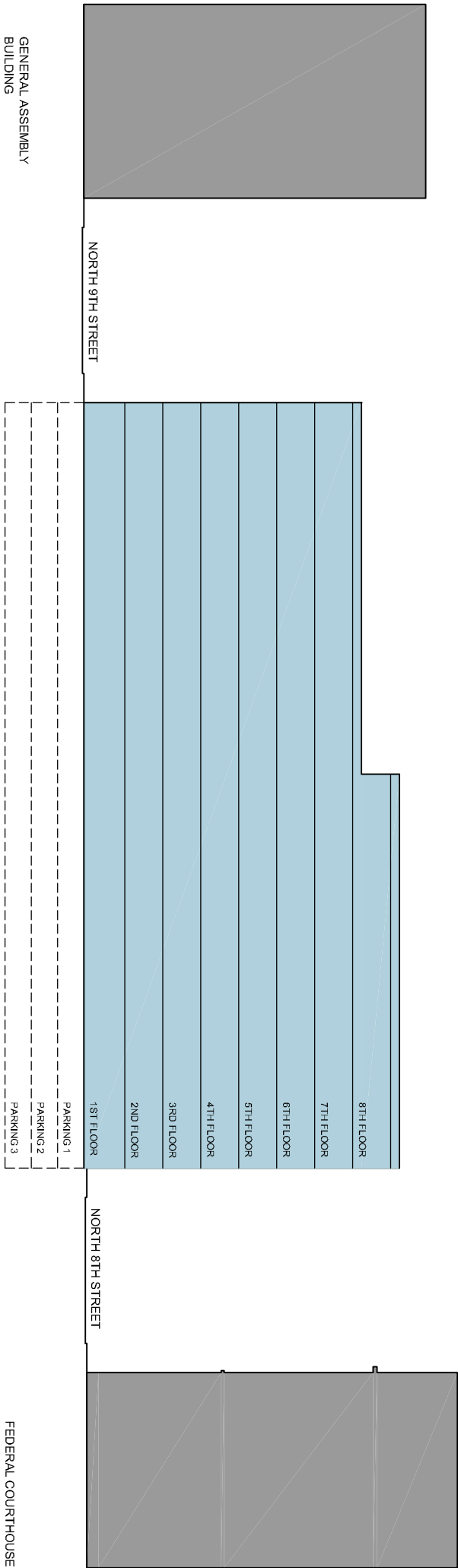


OPTION D1 BROAD STREET ELEVATION

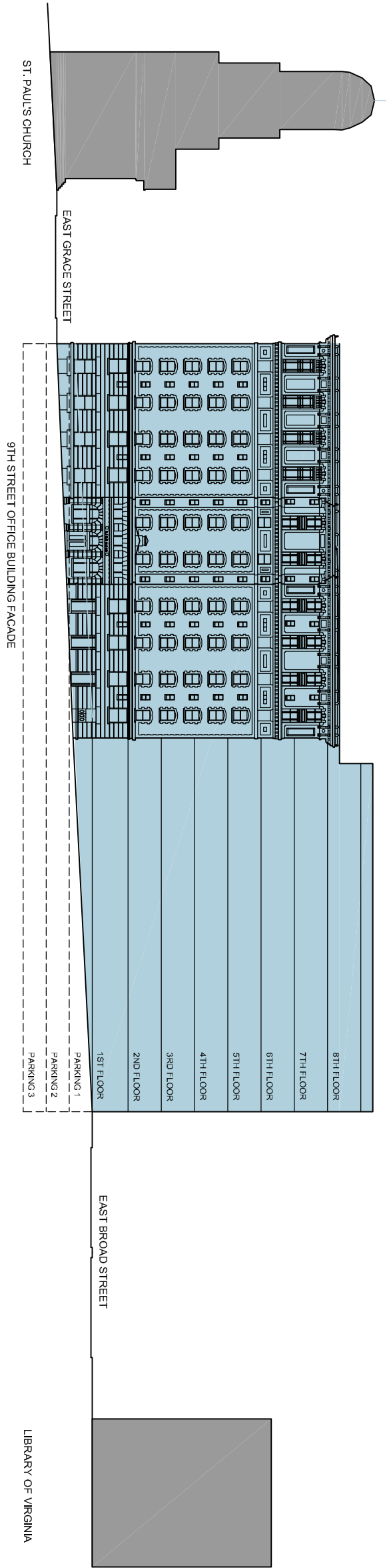


OPTION D1 9TH STREET ELEVATION





OPTION D2 BROAD STREET ELEVATION



OPTION D2 9TH STREET ELEVATION

**Development Option D: A new structure occupying the entire site**

**Option D** replaces both existing buildings with a new structure providing offices, parking and retail.

In **Options D1-3**, combinations of the façades of the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings are retained and integrated with the construction of the new building behind, as is the existing 9<sup>th</sup> Street lobby.

The scale of the new construction is roughly in keeping with the scale of surrounding structures. A total of approximately 570,000 gross square feet is provided, including 171,000 gsf of parking. Of this area, approximately 332,000 net square feet of office space is provided.

The actual configuration of the new construction could be varied, based of further development of design parameters. Use of floor area bonuses, dependent upon design decisions, could be used to further increase the floor area of the new construction.

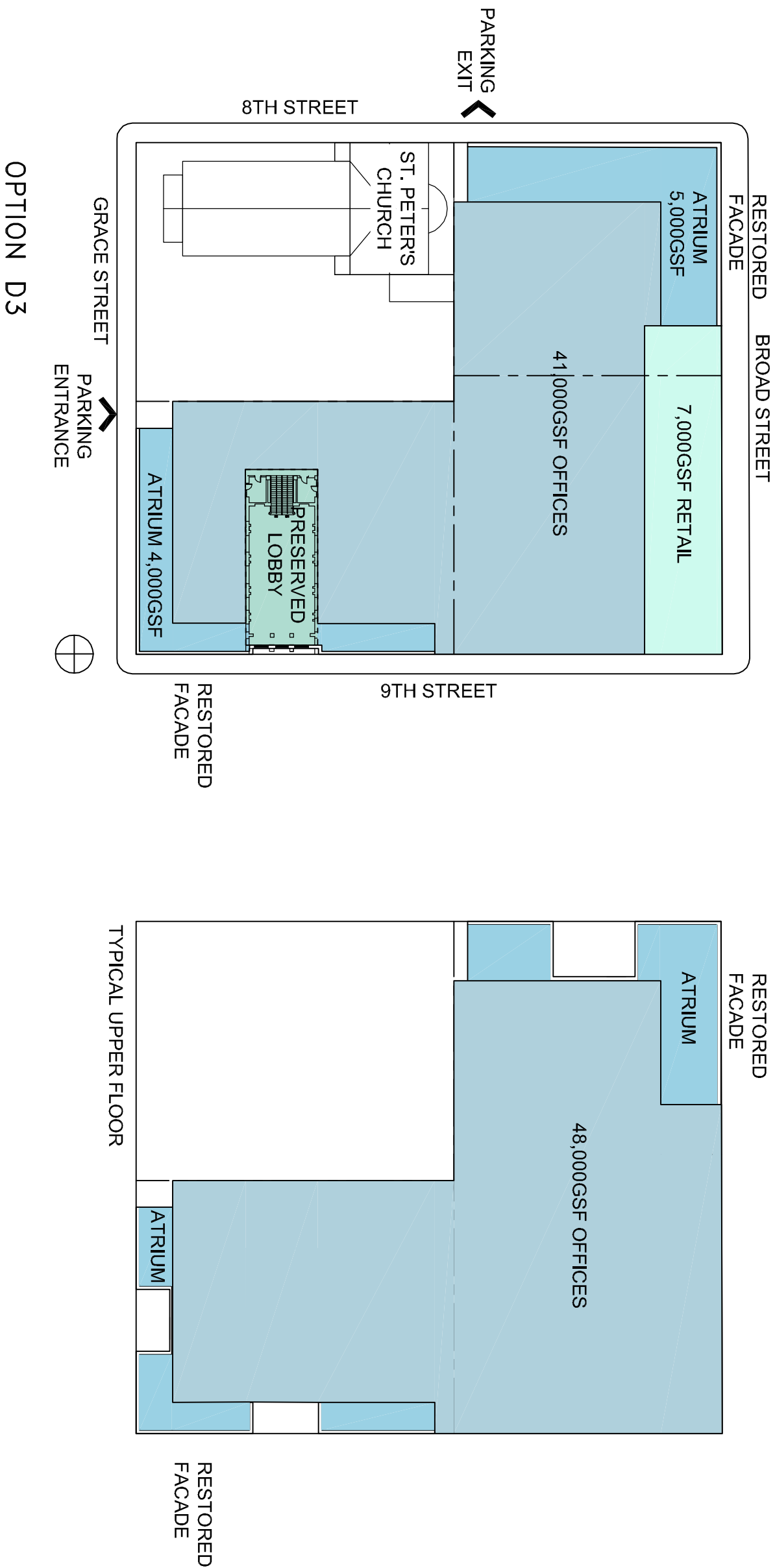
The scheme gives continuity to the street wall along both Broad and 9<sup>th</sup> Streets. Through careful architectural expression of the new construction a new building could be developed that is in keeping with the goals of the Capitol Master Plan, complements the Square and enlivens Broad Street. 7-10,000 square feet of retail space is accommodated along Broad Street.

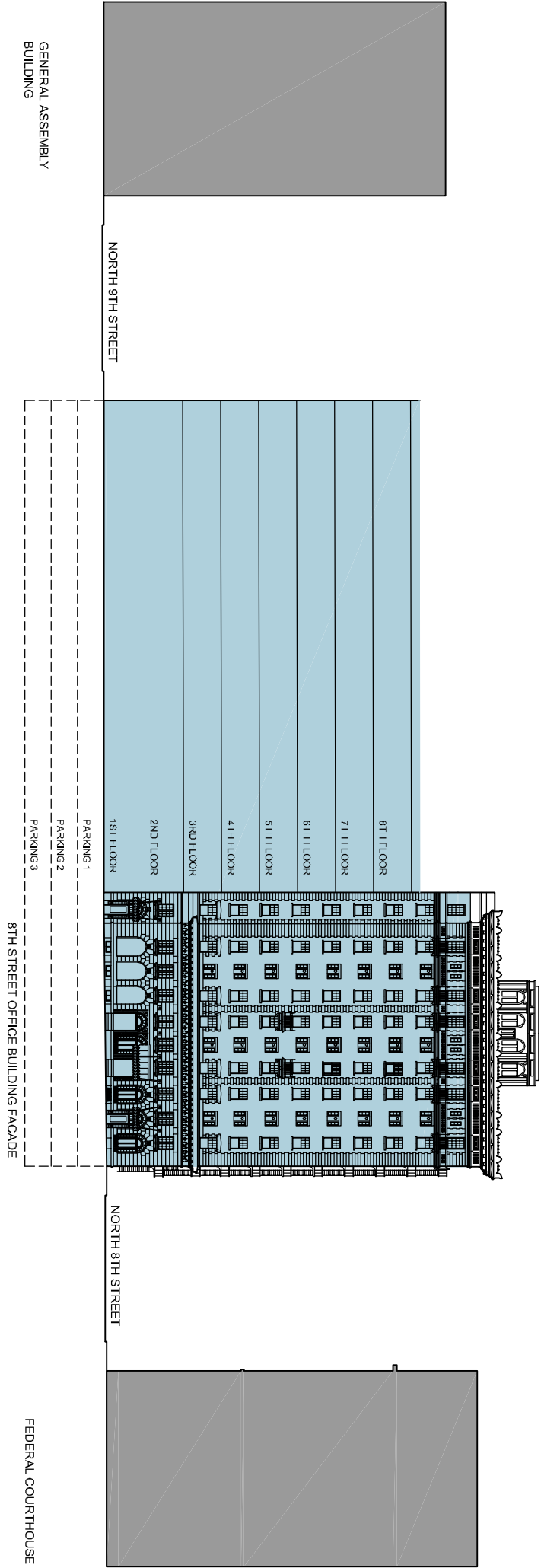
Three levels of below-grade parking, accommodating approximately 440 cars, are provided. Access is provided from Grace Street. The parking exit could be located along 9<sup>th</sup> Street or, if negotiation were successful with St. Peter's Church, along Grace Street.

One concern of this option is impact of the new construction on St. Peter's Church. The project would require the demolition of the 8<sup>th</sup> Street Building, excavation and underpinning immediately adjacent to the church. Special care would be required to remediate any vibration that could damage the structure or stained glass of both St. Peter's and St. Paul's Churches.

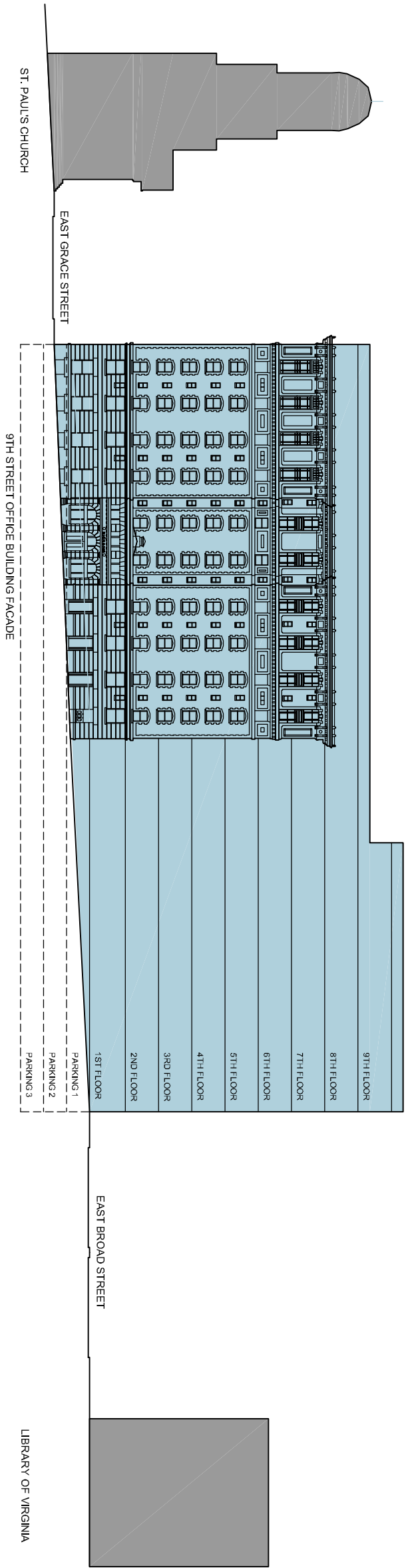
The new building could accommodate the occupants of the General Assembly Building during its renovation. The project could be designed so that it could be built in two phases, which could allow the 9<sup>th</sup> Street Building to remain operational during construction of the first phase. This first phase could subsequently house the occupants when the 9<sup>th</sup> Street Building is demolished for the construction of phase two.







OPTION D3 BROAD STREET ELEVATION



OPTION D3 9TH STREET ELEVATION

## 9. FINANCIAL ANALYSIS AND FINANCIAL STRUCTURE OPTIONS

### PROJECT DELIVERY SCENARIOS

There are several alternatives for structuring the selected development option, from the conventional approach of the Commonwealth financing the project without any participation of the private sector to creative structures, such as the public-private partnerships outlined in the Public-Private Education Facilities and Infrastructure Act.

The presence of historic structures eligible for being listed on the Virginia Landmarks Register and / or the National Register of Historic Places provides alternatives for private sector participation, use of long term and / or ground lease vehicles and Rehabilitation Investment Tax Credits both at the federal and state level. Such an approach can provide significant tax and equity incentives that make the reuse of the existing buildings financially more attractive.

If the private sector participates in the project, it is important that several factors be evaluated, assessed, understood and taken into consideration before such course of action is pursued:

- The ability of the Commonwealth to control building performance, operations, long term use and ownership of asset[s].
- A quality of design addressing all the issues that have been discussed in this report.
- Life cycle analysis of the selected option that is based not only on strict financing and depreciation rules that is normally the case with most private sector pro forma analysis, but on long term considerations as is the case with all assets of the Commonwealth on Capitol Square.

While there are financial structures that are based on depreciation schedules and thirty year mortgage cycles that may have significant benefits for private sector participation, the projected life of a development of the 8<sup>th</sup> / 9<sup>th</sup> Street site far exceeds the limited cycle of any private sector participation, even if it is as long as thirty or more years. Regardless of the approach taken, the Commonwealth will still be the owner and steward of the property for years to come and will be facing the same or similar sets of issues to those that are present today.

It is imperative, therefore, that any selected option is seen as a new addition to the Capitol Complex: an addition with a very long life. All financial planning, design, construction, building performance and long term aging issues should be viewed and addressed in this context.

In other words, how the project is structured has:

- Financial implications
- Design implications
- Delivery implications and
- Operations and maintenance implications

**Conventional Delivery Scenario**

The assumptions here are:

- There will be no participation of the private sector.
- There are no rehabilitation investment tax credits or any other such vehicles involved.
- The Commonwealth will finance directly such a project without any outside funds.

Under this scenario, there will be three entities that would participate. The Commonwealth, as the owner; the design team; and the constructor. The project will include:

- A design phase
- A bidding phase
- A construction phase

There are essentially two options for construction delivery, one through the traditional bidding process to the open market by selecting a General Contractor or using a Construction Manager. Within this latter option there are also two subsets, one with a Construction Manager as an agent for the owner and the second with a Construction Manager at Risk.

All of the above scenarios and options have pros and cons. The most important issue in this process is a careful prequalification of the participating entities, both in design and construction, to address highly challenging issues both in new construction and renovation, if such option is pursued.

A recent trend in the industry is the Design-Built option, one that merges the constructor and the design team into one entity, both delivering the design and construction of the project at a pre-set price.

The most significant issue in any of these scenarios is how the goals of the Commonwealth, the performance and design standards of the building and the quality of construction can be achieved without undesirable compromises.

**Public-Private Participation Models**

There are several models for public-private participation in delivering a project both on the financial structure side and the delivery side beyond what has discussed to date. The Public-Private Education Facilities and Infrastructure Act of 2002 [PPEA] provides a vehicle to pursue such options. The essence of all of these options, such as PPEA models, use of ground lease vehicles and / or lease back arrangements, is that the private sector assumes part or all of the responsibility of financing the project and delivering a product, with the public sector providing guaranteed occupancy and income. All of these models have attractive options and one set of concerns, i.e. how the interests of the Commonwealth will be protected, what the long term performance of the new or renovated asset will be, and how the Commonwealth will be able to have long term control and benefit from such a scenario.

REHABILITATION INVESTMENT TAX CREDITS

It is important to recognize the potentially valuable financial incentives that are available for historic rehabilitation of the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings under both state and federal rehabilitation tax credit programs. Beginning in 1976, the federal government established special tax credit provisions to encourage appropriate preservation and rehabilitation of historic structures, in part to recognize that there can be differences in the costs of development when comparing new construction to rehabilitation of existing structures. The success of the federal program, which provides a dollar-for-dollar credit against federal taxes owed [and which currently can be either carried back one year, or ahead for ten years], also sparked interest in creating similar incentives which might be applied against state taxes. Virginia's program shares some similarities with the federal program [particularly in the standards by which historic eligibility is determined and the design criteria that must be met to qualify], but also provides some key incentives that are not available under the federal program. It should be noted, however, that depending upon the selected rehabilitation use and assuming the appropriate design and renovation standards are met, both credits can apply, potentially offering credits for up to 45% of the amount spent on approved rehabilitation [including both hard and soft costs, with certain exceptions]. The Virginia credit allows 25% of the cost for certified rehabilitation of certified historic structures, while the federal tax credit allows 20% credits.

Under both the federal and Virginia rehabilitation tax credit programs, the incentives are intended to encourage appropriately designed and constructed renovations of buildings 'certified' as historic, either through individual listings on the Department of Interior's National Register of Historic Places [the National Register] or as 'contributing' structures in National Register Historic Districts. Both programs use the Secretary of Interior's Standards for Rehabilitation [sometimes called the Secretary's Standards] as the basis for evaluation of appropriate design of rehabilitation and the quality and appropriateness of construction methods. The goal of the programs is to place deteriorated/blighted or neglected historic buildings 'in service', that is, providing improvements that will continue the buildings' use over time. However, the federal program is directed toward 'commercial' properties [i.e., revenue-generating projects]; these projects therefore tend to focus on rental residential, retail and commercial office uses located in suitably renovated structures determined to be historic. In addition to renovation for commercial uses, it is important to recognize that the Virginia tax credit program also allows homeowners to receive tax credits for renovations of private homes that meet the tests of historic designation and design/construction under the approved standards. Since the federal program began thirty years ago, over 1400 historically significant structures have been returned to productive service. The Virginia state program, initiated in 1997, has already generated over \$125 Million of economic activity independent of the federal program. Eligible expenditures include both the costs of rehabilitation construction for the eligible areas of historic structures [i.e., the costs of additions outside the original footprint are not included], as well as the soft costs for design and construction.

Both the state and federal programs are administered in Virginia by the Department of Historic Resources [DHR]. As the DHR website states, "eligible expenses may include any work that is properly chargeable to a building's capital account in connection with a certified rehabilitation. Essentially, this means that all work done to structural components of the building will be eligible, as well as certain soft costs such as architectural and engineering fees, construction period interest and taxes, construction management costs, and reasonable developer fees. Expenses related to new heating, plumbing and electrical systems are eligible, as well as expenses related to updating kitchens and bathrooms, compliance with ADA [the Americans



with Disabilities Act], and fire suppression systems and fire escapes. Acquisition costs, however, and any expenses attributable to additions or enlargements of the building are not eligible. Under the federal program, site work and landscape elements are not eligible expenses. Under the state program, certain site work may be eligible.”

The importance of these credits in “leveling the playing field” economically and financially between rehabilitation and new construction alternatives cannot be overemphasized. The tax credits have proved to be a powerful tool in both preserving eligible historic structures, as well as equalizing [or providing net positive] benefits that are not available for new construction. In the case of the Eighth and Ninth Street Buildings, which are the subject of this alternatives analysis, the value of the historic tax credits could reduce the effective “cost” of preservation to not only be competitive with new construction, but [depending upon the scale of investment and whether or not the federal credits are also included with state credits] could result in a substantial financial incentive for preservation.

**Required Level of Investment**

For the federal credit, project expenditures must be for “substantial rehabilitation”, defined by the Internal Revenue Service as ‘exceeding the owner’s adjusted basis in the building [not including land value, as the IRS does not consider land to be depreciable], or \$5,000, whichever is greater. The adjusted basis is generally defined as the purchase price of the property, less the value of the land, any depreciation already taken on the property plus the value of any earlier capital investments.

Requirements for the state program are different from the federal program. To qualify for the state credit, the rehabilitation expenditures must be:

- For owner-occupied structures, at least 25% of the assessed value of the buildings for local real estate purposes for the year before the rehabilitation work began
- For all other eligible structures, at least 50% of the assessed value of the buildings for local real estate tax purposes for the year before the rehabilitation work began

**Rehabilitation Work Period**

Rehabilitation work can either be completed in phases [although the state credit requires that phasing be included in the original rehabilitation program and project description to the DHR; projects may not be rescheduled in phases after work has begun] or completed as a single project. But it should be noted that, for the federal rehabilitation credit, the “substantial rehabilitation” test and the “material rehabilitation” test for the state credit must be finished within a consecutive twenty-four month period ending during the year in which the credits are claimed. For most projects, this means that the greater part of the total expenditures must be made within a two-year period. For phased projects, work must be completed within sixty months/five years.

**Eligibility of the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings**

Both the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings are eligible for the federal and state credits, assuming that [for the federal credits] the uses meet the test for a commercial [revenue-producing] use. Under the regulations for the federal credits, there is a limitation on the percentage of the total building area that can be occupied by a governmental or non-profit tenant, even if the rest of

the building is occupied by commercial uses. The total allowable percentage of non-profit or governmental use allowed for the federal credit is 33 1/3% of the gross building area.

**Selling the Building After the Credit is Taken**

To receive the full federal credit, the building cannot be sold or lose its income-producing status within five years after the rehabilitation is completed; should the building be sold or lose its income-producing status, the amount of the credit is reduced by 20 percent for each succeeding year. For example, if a rehabilitated building is sold one year after receiving the credit, 80% [20% per year for the remaining four years] is deducted from the credit's value. This is also called a 'recapture' penalty. The National Park Service also reserves the right to inspect a rehabilitated building at any time during the five-year period to assure that the work included in the credit has been completed as presented in the tax credit application. The credit can be revoked if the work differs from the approved standard, if it is not consistent with the Secretary's Standards or if further unapproved alterations have been made.

The five year recapture period means that, should the 8<sup>th</sup> and / or 9<sup>th</sup> Street Building be converted to rental housing, the building could not be converted to condominiums and sold before the full term of the credit has passed without reducing the value of the total credit according to the recapture requirements. Some developers consider this to be a disincentive, particularly in a strong for-sale housing market. However, under the Virginia state tax credit program, there is no continuing ownership requirement following rehabilitation completion. This suggests that a developer might rehabilitate one or both of the structures and sell them as condominiums right away.

**Tax Credit Syndication**

Similar to other real estate-related financial instruments, the Tax Credits can be syndicated through a limited partnership, although the value of the credit is often discounted by 10-20 % of the value in exchange for receiving the reduced value earlier in the investment cycle. Under the state credit program, the credit may be allocated by agreement among partners, a tool that offers greater flexibility to developers and their investors.

**Application for the Credit**

The application process for the federal and state credits is administered through the Virginia DHR. The process includes three parts:

- Part 1 requests certification of the building as a contributing part of a historic district. For individually listed buildings [which already establishes the structure's classification as historic], no Part 1 is necessary. All others – buildings identified as 'contributing' to a listed historic district or eligible for individual listing, a Part 1 is required.
- Part 2 requests certification that the proposed rehabilitation work is anticipated to be consistent with the Secretary's Standards. For this part of the certification process, detailed documentation [photographic, text and plans] must be submitted for review by DHR.
- Part 3 requests certification of the completed work as consistent with the Secretary's Standards. For the state credit, if the eligible expenses exceed \$100,000, a separate review and certification of project records by a Certified Public Accountant is also required.

**BUILDING DISPOSITION VALUATION**

Determining a valuation of buildings for disposition can be approached in several ways, depending upon the existing [or proposed] use, the condition of the building [also known as an ‘improvement’ to differentiate the structure from the land] and the location of the site as it relates to other property values and uses. The underlying concept of ‘property value’ is determined by sale; it is worth what a purchaser believes it to be worth, and the transaction establishes the actual valuation. Of course, perceived values depend upon many factors and priorities by buyers that affect value, one of which [for commercial properties] is the ability to increase the value of a site through increased rents [often spurred by investment to improve the quality of the building], through appreciation in value over time [assuming changing markets or purchase below the value others might perceive], through a change in use, through a flexible regulatory process [which reduces risk], or through increases in density [often a result of demolition or additions to existing properties] to allow new area for revenue generation. These elements all contribute to ‘value’.

If a property is proposed for disposition, but a transaction has not taken place [or a use change may alter prevailing opinions of value] the property may be compared to comparable/relevant properties to create a value by reference; this is usually conducted by a qualified, certified property appraiser, who reviews other properties that have similar qualities and have recently been sold. This comparison forms the basis of a property appraisal. For the Eighth and Ninth Street Buildings, an appraisal by a historic building specialty appraiser [who has experience with the advantages and challenges that historic properties offer] would be a better gauge of potential value than an appraisal by a certified appraiser without historic building experience.

Alternatively, for purposes of establishing a market value, it may also be useful to capitalize the existing or potential rental revenues that result from a particular use [or change of use]. That is, the “value” generated by the rental stream from a restaurant may be different from that generated by an office use or another retail category located in the same space. With regard to the Eighth and Ninth Street Buildings, it is suggested that, to establish a value for disposition of one/both of the structures, the Commonwealth has two options:

- Commission an appraisal of the buildings from an appraiser familiar with determining the value of historic structures. Some appraisers who are unfamiliar with the costs of rehabilitation or with assessing the physical condition of an older property may inadvertently discount the market value of the ‘improvement’, focusing on the value of the land alone. In our experience, historic structures should be appraised by professionals who understand enough about historic buildings and what it costs to rehabilitate and operate them rather than appraisers who are only familiar with new construction sites.
- Determine which commercial uses would be considered appropriate as a basis for disposition, and then make projections of potential rental revenues related to those uses. For example, allowing developers to consider conversion of one / both of the buildings from office use to residential or hotel uses could potentially result in a different disposition ‘value’ than would requiring a developer to retain state offices as the only allowed use.

If the process follows the pattern for other types of property disposition by public entities, the Commonwealth's review of proposed disposition value will be based on the amount offered for the property transaction. However, it is suggested that other factors should be weighed as context for a decision – the experience of the offerer in completing projects of this nature, as sometimes developers may inflate values for a proposed disposition, but may not be able to secure financing or have the level of proven experience necessary to complete the project to the standards required by the Commonwealth. Clarifying expectations about use, quality of the completed project and how the Eighth and Ninth Street project will fit into the CMP and the urban fabric of downtown Richmond over time will also have an effect on value.

The second factor is the changing nature of real estate uses over time and the developer's capacity / priority to retain ownership over time. Some properties are 'valued' with a short-term hold and future sale in mind. These properties need to generate increased value quickly, and may result in lower levels of investment / improvement in order to improve near-term profits. Longer-term development schedules can result in significantly higher profitability for developers [and therefore may suggest a higher initial value], but requires more 'patient' investment expectations. From a real estate point of view, neither is a "wrong" answer; both can be profitable. But from an urban development point of view, short-term property ownership does not often result in significant, long-term enhancement of a site or structure.

It is important to emphasize that while these alternative financial structures may be possible, they have specific limitations and do require a specific administrative, legal and accounting structure that needs to be evaluated carefully by both the Commonwealth and the private entity that may participate in such venture to ensure compliance with the Commonwealth's laws and regulations, as well as the US Tax Code.

## 10. COMPARING THE FOUR DEVELOPMENT SCENARIOS: A COST-BENEFIT ANALYSIS

### CRITERIA FOR EVALUATING DEVELOPMENT OPTIONS:

The forces affecting the project create the criteria by which development options can be evaluated:

- Programming
- Preservation
- Architectural Design
- Urban Design
- Site Planning
- Functional Layout / Floor Plate
- Parking / Traffic
- Security
- Constructability
- Schedule / Phasing
- Cost per Square Foot
- Financing

Descriptions of the evaluation criteria are as follows:

#### Programming

The option meets the base-line needs of the Commonwealth. Our findings indicate that the Commonwealth's base-line needs are 200,000 net assignable square feet of space and approximately 150 parking spaces. While there may be some scenarios that can provide significantly more space and parking, the potential impacts of such a course of action should also be taken into consideration, i.e. additional costs for deeper excavation, protection of adjacent historic structures, traffic implications, potential security concerns associated with a large underground garage, etc. As can be seen below, each of the options meets this requirement, some with more of an excess capacity than others. Due to the anticipated future space needs of the Commonwealth, any additional space could easily be absorbed.



KEY	
<b>Option A</b>	Renovate both the 8 <sup>th</sup> and 9 <sup>th</sup> Street Buildings for use as office space for the Commonwealth of Virginia, and construct a new office building on the vacant parcel at 9 <sup>th</sup> and Broad Street.
<b>Option A1</b>	Renovate the 9 <sup>th</sup> Street Building for office space, construct a new office building at 9 <sup>th</sup> and Broad Streets, and renovate the 8 <sup>th</sup> Street Building as a hotel or residential project.
<b>Option B</b>	Renovate the 9 <sup>th</sup> Street Building for offices, demolish the 8 <sup>th</sup> Street Building and construct a new office building along Broad Street.
<b>Option B1</b>	Demolish the 8 <sup>th</sup> Street Building, preserving the façade as part of a new office structure along Broad Street. Renovate the 9 <sup>th</sup> Street Building for a residential or hotel project.
<b>Option C</b>	Renovate the 8 <sup>th</sup> Street Building as office space and demolish the 9 <sup>th</sup> Street Building. Build a new office building along 9 <sup>th</sup> Street.
<b>Option C1</b>	Demolish the 9 <sup>th</sup> Street Building, preserving the façade and lobby as part of a new office structure along 9 <sup>th</sup> Street. Renovate the 8 <sup>th</sup> Street Building for a residential or hotel project.
<b>Option D</b>	Demolish both existing buildings and construct a new office building over all three sites.
<b>Option D1</b>	Preserve the façade of the 8 <sup>th</sup> Street Building, demolish the 9 <sup>th</sup> Street Building and construct a new building over all three parcels.
<b>Option D2</b>	Preserve the façade and lobby of the 9 <sup>th</sup> Street Building, demolish the 8 <sup>th</sup> Street Building and construct a new office building on all three site.
<b>Option D3</b>	Preserve the facades of both historic structure and the first floor lobby of 9 <sup>th</sup> Street. Construct a new office building behind the two facades covering the entire site.

Option GSF										
	A	A1	B	B1	C	C1	D	D1	D2	D3
Offices										
8th Street Reuse	110,300				110,300					
9th Street Reuse	140,100	140,100	140,100							
9th Street Lightcourt Infill			12,000							
New Construction	162,000	162,000	251,450	251,450	304,800	300,800	395,300	393,300	391,300	389,300
Total Office GSF	412,400	302,100	403,550	251,450	415,100	300,800	395,300	393,300	391,300	389,300
Office N ASF [8 <sup>th</sup> – 70%, 9 <sup>th</sup> – 80%, New - 85%]	324,010	235,770	323,802	213,733	347,320	255,680	336,005	334,305	332,605	330,905
Parking Spaces	160	160	270	270	320	320	440	440	440	440

Preservation

The option preserves the entire building, the exterior envelope and / or important spaces. From the preservation point of view, the preservation of an entire building is the preferred course of action. Façade retention is less desirable and preservation of selected elements is even less desirable. The buildings exist in three dimensions and are more than just their facades. Given the demonstrated architectural and cultural significance of both the 8<sup>th</sup> and 9<sup>th</sup> Street Buildings, the choice to demolish them must be made carefully. Both buildings have added to the quality of the experience of the Square and the city and they could be made important contributors again.

Architectural Design

This option provides a design that relates to the context of the site, it is of timeless quality and can be a worthwhile addition to the architectural continuum of the Capitol Complex. Historic buildings, especially those that meet the listing criteria, have demonstrated a commonly accepted value as important edifices that are worth preserving. In other words, they possess architectural qualities that been tested over decades. A new building can also possess similar architectural qualities if principles of design excellence are applied and a well-thought out design process is in place that would ensure the creation of [an] distinguished building[s]. Architectural design has several dimensions to be considered. They include items such as the quality of space, light, functionality, sense of place, quality of materials, and building systems performance. It also has to do with architectural expression, vocabulary, materials, etc. Most importantly however, it has to do with the continuation of an architectural tradition of excellence that started with Jefferson’s Capitol and continued with several landmark buildings that have passed the test of time. Any new addition to this architectural continuum must be based on sound principles of design excellence.

Urban Design

The option addresses key urban design issues, namely:

- Relationship to the street / streetscape
- Relationship[s] to the Square and other Capitol Complex Buildings
- Relationship[s] to its context

Each of the options brings something different to the urban landscape: historic buildings, new construction, retail, traffic and other considerations. The most significant difference is the choice between existing and new buildings. The mixed development of Option A contrasts with the larger scale of Option D. Through careful design, any of the options can be made to reinforce the existing connections between the site, the city and the Capitol.

Site Planning

The option provides sensitive and sensible access and connections to the building, from basic services such as loading docks and parking egress to streetscape issues and connections to the Capitol Complex.

Functionality

The option addresses contemporary standards of a work / office environment, from basic dimensions and proportions to column grid and floor-to-floor dimensions. While a new building can easily be designed to meet all of the modern design standards, there are several enhancements that can be made to a historic building also that would enhance utilization, efficiency, installation of new systems, etc. Each of the buildings, due their floor plate configuration and floor-to-floor heights, will accommodate the proposed uses to varying degrees. For example, the 8<sup>th</sup> Street Office Building and any new construction could accommodate contemporary open office planning more effectively than the 9<sup>th</sup> Street Office Building due to its structural configuration. The 9<sup>th</sup> Street Building can accommodate residential or hotel uses more effectively.

Traffic and Parking Assessment

The option meets the baseline parking requirements of the Commonwealth and does not impact the city grid and / or traffic patterns. Please also refer to Criterion 1.

One important finding of this plan is the scenario of a potential collaboration between the Commonwealth and St. Peter's to develop a common parking plan and access off of Grace Street, a design scheme that would provide the best urban design and streetscape treatment for the entire block, as well as help manage risks associated with the excavation for new construction next to the historic church.

Based on a range of building options under consideration, projected site traffic volumes were generated using ITE Trip Generation Manual 6th Edition. The proposed worst case site traffic added to the existing volumes to generate the total traffic volumes. The total traffic volumes were analyzed using the existing signal timings. Most of the intersections continue to operate at acceptable levels of service. Since the intersections work for the worst case, they will also work for smaller development options.

Each of the options meets the parking minimum requirement of 150 spaces. The options also provide additional parking, the demand for which has been shown in the CPM.

An analysis of the existing and proposed facilities for the site based on the worst case scenario has the largest gross square footage and, based on City of Richmond zoning regulations, would require approximately 1,015 parking spaces. Although the State is not required to satisfy local zoning requirements, this is a good guide for assessing parking needs. These same analyses of the existing 8<sup>th</sup> and 9<sup>th</sup> Street Office Buildings indicate that 277 and 380 parking spaces would be required, respectively. These requirements do not treat the Capitol Square complex as a whole and do not consider off-site parking, as is standard for most Commonwealth office buildings.

Underlying the required parking needs for any development on 8<sup>th</sup> or 9<sup>th</sup> Street are the parking needs for the General Assembly members and senior staff. The General Assembly parking needs typically last no more than three months out of the year and require flexibility from the facility staff. Providing a 150 space parking facility will provide the General Assembly members with parking across from Capitol Square.

Converting the existing 8<sup>th</sup> and 9<sup>th</sup> Street Buildings to either hotel or apartment uses would require the following parking spaces:

8<sup>th</sup> Street Building:

- 160 room hotel will require 130 spaces
- 70 apartments will require 70 spaces;

9<sup>th</sup> Street Building:

- 190 room hotel will require 145 spaces
- 90 apartments will require 90 spaces.

If either of the buildings was converted to a use other than offices, ownership would be transferred or a long-term lease initiated, which would trigger the requirement to meet City of Richmond parking requirements.

Security

The option does meet the base-line security requirements of the Commonwealth. Certain basic assumptions need to be made here including:

- Removing on street parking around the building[s][Administrative measures]
- Manage and control on-site parking [administrative measures]
- At a minimum, provide safety glass to provide basic protection for the building[s] occupants in the event of an explosion

Higher level of protection, such as blast and ballistic protection, can be addressed for both an existing and a new building at an additional cost. The discussion of such level of security matters is beyond the Scope of this study.

Constructability

The option has / does not have significant constructability issues, relating to foundations, adjacent structures, protection of important resources, etc. It is clear that more aggressive construction, i.e. multiple basements, deep foundations, piles, etc. complicate construction and increase the cost of the project. On the other hand, more preservation of existing building[s] / structure[s] limit the need for such invasive procedures. These issues affect the costs of the project. The most significant difference between the options has to do with issues related to demolition and construction adjacent to St. Peter's Church. Any construction activity next to the church raises issues of protection during construction and possible underpinning.

Schedule / Phasing

The option allows flexibility in undertaking the project in either a single or multiple phases. Any of the options can be phased and sequenced in a variety of ways thereby providing several options for the Commonwealth. The ability to complete the construction of a development option in a timely and coordinated manner will be important. Choices to retain one or more of the existing buildings may add flexibility to the Commonwealth's ability to use buildings as swing space for other projects or facilitate the ability to relocate departments in an effective manner.

Cost per Square Foot

The option has higher / lower cost per square foot. The cost of renovation is slightly higher per square foot. The cost differential is attributed to two factors:

- Deferred maintenance associated with the exterior envelope
- Design enhancements to create a more efficient and code compliant floor plate and stacking.

Construction Cost

Based on the recommendations included in Section 6 for the reuse of the existing 8th and 9th Street Buildings and for new construction as outlined in Section 7, the following represents estimated construction costs for each Development Option. Construction costs can be analyzed by building, use and owner:

8th Street Office Building		9th Street Office Building		New Construction		Parking	Total Cost to	Total Cost to
Option	Use	Cost	Use	Cost	Use	Cost	Commonwealth	Developer
A	Offices	\$29,240,406	Offices	\$34,279,815	Offices	\$43,756,932	\$6,106,062	\$113,383,215
A1	Apt/Hotel	\$26,051,417	Offices	\$34,285,044	Offices	\$43,938,547	\$6,106,995	\$84,330,586
								\$26,051,417
B	Offices	\$37,480,794	Offices	\$68,194,249	Offices	\$10,302,687		\$115,977,730
B1	Apt/Hotel	\$30,168,742	Offices	\$71,008,212	Offices	\$10,304,966		\$81,313,178
								\$30,168,742
C	Offices	\$29,230,265	Offices	\$79,419,440	Offices	\$12,207,889		\$120,857,594
C1	Apt/Hotel	\$26,040,131	Offices	\$81,109,742	Offices	\$12,208,696		\$93,318,438
								\$26,040,131
D	Offices	\$100,610,842	Offices	\$15,390,417				\$116,001,259
D1	Offices	\$103,288,219	Offices	\$15,388,515				\$118,676,734
D2	Offices	\$102,028,660	Offices	\$15,389,399				\$117,418,059
D3	Offices	\$104,705,992		\$15,387,542				\$120,093,534

Italics = Developer Cost

KEY	
Option A	Renovate both the 8 <sup>th</sup> and 9 <sup>th</sup> Street Buildings for use as office space for the Commonwealth of Virginia, and construct a new office building on the vacant parcel at 9 <sup>th</sup> and Broad Street.
Option A1	Renovate the 9 <sup>th</sup> Street Building for office space, construct a new office building at 9 <sup>th</sup> and Broad Streets, and renovate the 8 <sup>th</sup> Street Building as a hotel or residential project.
Option B	Renovate the 9 <sup>th</sup> Street Building for offices, demolish the 8 <sup>th</sup> Street Building and construct a new office building along Broad Street.
Option B1	Demolish the 8 <sup>th</sup> Street Building, preserving the façade as part of a new office structure along Broad Street. Renovate the 9 <sup>th</sup> Street Building for a residential or hotel project.
Option C	Renovate the 8 <sup>th</sup> Street Building as office space and demolish the 9 <sup>th</sup> Street Building. Build a new office building along 9 <sup>th</sup> Street.
Option C1	Demolish the 9 <sup>th</sup> Street Building, preserving the façade and lobby as part of a new office structure along 9 <sup>th</sup> Street. Renovate the 8 <sup>th</sup> Street Building for a residential or hotel project.
Option D	Demolish both existing buildings and construct a new office building over all three sites.
Option D1	Preserve the façade of the 8 <sup>th</sup> Street Building, demolish the 9 <sup>th</sup> Street Building and construct a new building over all three parcels.
Option D2	Preserve the façade and lobby of the 9 <sup>th</sup> Street Building, demolish the 8 <sup>th</sup> Street Building and construct a new office building on all three site.
Option D3	Preserve the facades of both historic structure and the first floor lobby of 9 <sup>th</sup> Street. Construct a new office building behind the two facades covering the entire site.

KEY	
<b>Option A</b>	Renovate both the 8 <sup>th</sup> and 9 <sup>th</sup> Street Buildings for use as office space for the Commonwealth of Virginia, and construct a new office building on the vacant parcel at 9 <sup>th</sup> and Broad Street.
<b>Option A1</b>	Renovate the 9 <sup>th</sup> Street Building for office space, construct a new office building at 9 <sup>th</sup> and Broad Streets, and renovate the 8 <sup>th</sup> Street Building as a hotel or residential project.
<b>Option B</b>	Renovate the 9 <sup>th</sup> Street Building for offices, demolish the 8 <sup>th</sup> Street Building and construct a new office building along Broad Street.
<b>Option B1</b>	Demolish the 8 <sup>th</sup> Street Building, preserving the façade as part of a new office structure along Broad Street. Renovate the 9 <sup>th</sup> Street Building for a residential or hotel project.
<b>Option C</b>	Renovate the 8 <sup>th</sup> Street Building as office space and demolish the 9 <sup>th</sup> Street Building. Build a new office building along 9 <sup>th</sup> Street.
<b>Option C1</b>	Demolish the 9 <sup>th</sup> Street Building, preserving the façade and lobby as part of a new office structure along 9 <sup>th</sup> Street. Renovate the 8 <sup>th</sup> Street Building for a residential or hotel project.
<b>Option D</b>	Demolish both existing buildings and construct a new office building over all three sites.
<b>Option D1</b>	Preserve the façade of the 8 <sup>th</sup> Street Building, demolish the 9 <sup>th</sup> Street Building and construct a new building over all three parcels.
<b>Option D2</b>	Preserve the façade and lobby of the 9 <sup>th</sup> Street Building, demolish the 8 <sup>th</sup> Street Building and construct a new office building on all three site.
<b>Option D3</b>	Preserve the facades of both historic structure and the first floor lobby of 9 <sup>th</sup> Street. Construct a new office building behind the two facades covering the entire site.

Construction cost must be weighed against square footage provided by the project:

Option	8th Street Office Building		9th Street Office Building		New Construction		Parking	Total	Cost to
	Use	GSF	Use	GSF	Use	GSF	Spaces	Office GSF	Commonwealth
A	Offices	110,300	Offices	140,100	Offices	162,000	160	412,400	\$113,383,215
A1	Apt/Hotel	110,300	Offices	140,100	Offices	162,000	160	302,100	\$84,330,586
B			Offices	152,100	Offices	251,450	270	403,550	\$115,977,730
B1			Apt/Hotel	140,100	Offices	251,450	270	251,450	\$81,313,178
C	Offices	110,300			Offices	304,800	320	415,100	\$120,857,594
C1	Apt/Hotel	110,300			Offices	300,800	320	300,800	\$93,318,438
D					Offices	395,300	440	395,300	\$116,001,259
D1					Offices	393,300	440	393,300	\$118,676,734
D2					Offices	391,300	440	391,300	\$117,418,059
D3					Offices	389,300	440	389,300	\$120,093,534

*Italic = Developer GSF*

The estimated construction costs can also be evaluated on per square foot basis, by use and building:

8th Street Office Building		9th Street Office Building		New Construction		Parking	
Option	Use	Cost/GSF	Use	Cost/GSF	Use	Cost/GSF	Cost/Space
<b>A</b>	Offices	\$265	Offices	\$245	Offices	\$260	\$38,163
<b>A1</b>	Apt/Hotel	\$236	Offices	\$245	Offices	\$262	\$38,169
<b>B</b>			Offices	\$268	Offices	\$249	\$38,158
<b>B1</b>			Apt/Hotel	\$215	Offices	\$277	\$38,167
<b>C</b>	Offices	\$265			Offices	\$256	\$38,150
<b>C1</b>	Apt/Hotel	\$236			Offices	\$264	\$38,152
<b>D</b>					Offices	\$248	\$34,978
<b>D1</b>					Offices	\$255	\$34,974
<b>D2</b>					Offices	\$252	\$34,976
<b>D3</b>					Offices	\$258	\$34,972

*Italic = Developer Cost*



KEY	
<b>Option A</b>	Renovate both the 8 <sup>th</sup> and 9 <sup>th</sup> Street Buildings for use as office space for the Commonwealth of Virginia, and construct a new office building on the vacant parcel at 9 <sup>th</sup> and Broad Street.
<b>Option A1</b>	Renovate the 9 <sup>th</sup> Street Building for office space, construct a new office building at 9 <sup>th</sup> and Broad Streets, and renovate the 8 <sup>th</sup> Street Building as a hotel or residential project.
<b>Option B</b>	Renovate the 9 <sup>th</sup> Street Building for offices, demolish the 8 <sup>th</sup> Street Building and construct a new office building along Broad Street.
<b>Option B1</b>	Demolish the 8 <sup>th</sup> Street Building, preserving the façade as part of a new office structure along Broad Street. Renovate the 9 <sup>th</sup> Street Building for a residential or hotel project.
<b>Option C</b>	Renovate the 8 <sup>th</sup> Street Building as office space and demolish the 9 <sup>th</sup> Street Building. Build a new office building along 9 <sup>th</sup> Street.
<b>Option C1</b>	Demolish the 9 <sup>th</sup> Street Building, preserving the façade and lobby as part of a new office structure along 9 <sup>th</sup> Street. Renovate the 8 <sup>th</sup> Street Building for a residential or hotel project.
<b>Option D</b>	Demolish both existing buildings and construct a new office building over all three sites.
<b>Option D1</b>	Preserve the façade of the 8 <sup>th</sup> Street Building, demolish the 9 <sup>th</sup> Street Building and construct a new building over all three parcels.
<b>Option D2</b>	Preserve the façade and lobby of the 9 <sup>th</sup> Street Building, demolish the 8 <sup>th</sup> Street Building and construct a new office building on all three site.
<b>Option D3</b>	Preserve the facades of both historic structure and the first floor lobby of 9 <sup>th</sup> Street. Construct a new office building behind the two facades covering the entire site.

Total and combined GSF construction costs are as follows:

Option	Commonwealth		PPEA/Developer	
	Cost	Cost/GSF	Cost	Cost/GSF
<b>A</b>	\$113,383,215	\$231		
<b>A1</b>	\$84,330,586	\$222	\$26,051,417	\$236
<b>B</b>	\$115,977,730	\$221		
<b>B1</b>	\$81,313,178	\$221	\$30,168,742	\$215
<b>C</b>	\$120,857,594	\$219		
<b>C1</b>	\$93,318,438	\$170	\$26,040,131	\$236
<b>D</b>	\$116,001,259	\$201		
<b>D1</b>	\$118,676,734	\$206		
<b>D2</b>	\$117,418,059	\$204		
<b>D3</b>	\$120,093,534	\$208		

These estimates do not include any income derived from the sale or lease of the building. These could be used to offset the construction cost of the office portion of a project.

The overall project costs per square foot are relatively higher when renovating the 8<sup>th</sup> and/or 9<sup>th</sup> Street buildings in combination with new construction. The greater the percentage of new construction included in an option, the lower the overall square foot cost. However, In terms of overall construction cost, options which include the existing buildings, are typically lower in overall cost, but provide also less square footage.

Detailed breakdowns of these totals are included in the Appendix. These estimates reflect 2006 construction dollars. Detailed scopes of work, based on decisions beyond the scope of this study, would need to be developed in order to refine these estimates. These estimates do not include project soft costs, which can run from 25-30% of construction cost.

KEY	
<b>Option A</b>	Renovate both the 8 <sup>th</sup> and 9 <sup>th</sup> Street Buildings for use as office space for the Commonwealth of Virginia, and construct a new office building on the vacant parcel at 9 <sup>th</sup> and Broad Street.
<b>Option A1</b>	Renovate the 9 <sup>th</sup> Street Building for office space, construct a new office building at 9 <sup>th</sup> and Broad Streets, and renovate the 8 <sup>th</sup> Street Building as a hotel or residential project.
<b>Option B</b>	Renovate the 9 <sup>th</sup> Street Building for offices, demolish the 8 <sup>th</sup> Street Building and construct a new office building along Broad Street.
<b>Option B1</b>	Demolish the 8 <sup>th</sup> Street Building, preserving the façade as part of a new office structure along Broad Street. Renovate the 9 <sup>th</sup> Street Building for a residential or hotel project.
<b>Option C</b>	Renovate the 8 <sup>th</sup> Street Building as office space and demolish the 9 <sup>th</sup> Street Building. Build a new office building along 9 <sup>th</sup> Street.
<b>Option C1</b>	Demolish the 9 <sup>th</sup> Street Building, preserving the façade and lobby as part of a new office structure along 9 <sup>th</sup> Street. Renovate the 8 <sup>th</sup> Street Building for a residential or hotel project.
<b>Option D</b>	Demolish both existing buildings and construct a new office building over all three sites.
<b>Option D1</b>	Preserve the façade of the 8 <sup>th</sup> Street Building, demolish the 9 <sup>th</sup> Street Building and construct a new building over all three parcels.
<b>Option D2</b>	Preserve the façade and lobby of the 9 <sup>th</sup> Street Building, demolish the 8 <sup>th</sup> Street Building and construct a new office building on all three site.
<b>Option D3</b>	Preserve the facades of both historic structure and the first floor lobby of 9 <sup>th</sup> Street. Construct a new office building behind the two facades covering the entire site.

Project Cost

As compared to construction costs, project costs includes “soft costs”, such as design fees, testing, owner expenses, etc. that can should be added to generate the total cost of a project. These costs are typically in the range of 25-30% of construction cost. The estimated project costs by option and use are as follows:

Commonwealth	Option				
	A	A1	B	B1	C
<b>Office Project Costs</b>					
Total Project Cost*	\$147,398,180	\$109,629,762	\$150,797,049	\$105,707,131	\$157,114,872
Disposition of Existing Property**	\$0	\$3,309,000	\$0	\$4,203,000	\$0
Net Cost	\$147,398,180	\$106,320,762	\$150797049	\$101,504,131	\$157,114,872
Cost/gsf	\$301	\$288	\$287	\$283	\$284
<b>Developer Residential/Hotel Project Costs:</b>					
8 <sup>th</sup> Street Office Building*		\$33,866,842		\$0	
9 <sup>th</sup> Street Office Building*		\$0		\$39,219,365	
Property Acquisition		\$3,309,000		\$4,203,000	
Preservation Tax Credits***		-\$8,466,710		-\$9,804,841	
Net Cost		\$28,709,132		\$33,617,524	
<b>Commonwealth</b>	Option				
<b>Office Project Costs</b>	C1	D	D1	D2	D3
Total Project Cost*	\$121,318,969	\$150,801,637	\$154,279,754	\$152,643,476	\$156,121,594
Disposition of Existing Property**	\$3,309,000	\$0	\$0	\$0	\$0
Net Cost	\$118,009,969	\$150,801,637	\$154,279,754	\$152,643,476	\$156,121,594
Cost/gsf	\$273	\$261	\$268	\$264	\$271
<b>Developer Residential/Hotel Project Costs:</b>					
8 <sup>th</sup> Street Office Building*		\$33,852,170			
9 <sup>th</sup> Street Office Building*		\$0			
Property Acquisition		\$3,309,000			
Preservation Tax Credits***		\$8,463,042			
Net Cost		\$22,080,128			
* Project Cost = Construction Cost plus 30%					

\*\* Based on \$30/sf[range is \$20-40/sf depending on appraisal – actual amount will vary]

\*\*\* Assume 25% of project costs [subject to SHPO review and approval - actual amount will vary depending on scope]

Financing

The option can be implemented with / without a variety of financial structures. While there are may be additional vehicles for private sector participation, they need to be carefully evaluated against the complex administrative, legal and financial requirements of the Commonwealth of Virginia and the U.S. Federal Tax Code.

SELECTION CRITERIA: ORDER, RELATIVE WEIGHTS AND OTHER CONSIDERATIONS

Based on the above discussion, it becomes evident that the criteria have both quantitative and qualitative dimensions to them and could be applied differently by different individuals. Furthermore, one could argue that there should be different weights for specific criteria emphasizing their relative importance and significance. For example, one can argue that the cost per square foot is more important than the preservation of an historic resource and / or vice versa. It is therefore clear that there will always be a degree of subjective interpretation and potential disagreement.

With these observations in mind, our team attempted to evaluate the various options to see how they would rate against each other.

The criteria were applied in the following manner:

- All criteria were treated equally.
- The highest score was 5 and lowest was 0.

KEY	
<b>Option A</b>	Renovate both the 8 <sup>th</sup> and 9 <sup>th</sup> Street Buildings for use as office space for the Commonwealth of Virginia, and construct a new office building on the vacant parcel at 9 <sup>th</sup> and Broad Street.
<b>Option A1</b>	Renovate the 9 <sup>th</sup> Street Building for office space, construct a new office building at 9 <sup>th</sup> and Broad Streets, and renovate the 8 <sup>th</sup> Street Building as a hotel or residential project.
<b>Option B</b>	Renovate the 9 <sup>th</sup> Street Building for offices, demolish the 8 <sup>th</sup> Street Building and construct a new office building along Broad Street.
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<b>Option C</b>	Renovate the 8 <sup>th</sup> Street Building as office space and demolish the 9 <sup>th</sup> Street Building. Build a new office building along 9 <sup>th</sup> Street.
<b>Option C1</b>	Demolish the 9 <sup>th</sup> Street Building, preserving the façade and lobby as part of a new office structure along 9 <sup>th</sup> Street. Renovate the 8 <sup>th</sup> Street Building for a residential or hotel project.
<b>Option D</b>	Demolish both existing buildings and construct a new office building over all three sites.
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<b>Option D2</b>	Preserve the façade and lobby of the 9 <sup>th</sup> Street Building, demolish the 8 <sup>th</sup> Street Building and construct a new office building on all three site.
<b>Option D3</b>	Preserve the facades of both historic structure and the first floor lobby of 9 <sup>th</sup> Street. Construct a new office building behind the two facades covering the entire site.

Evaluation Criteria	Option									
	A	A1	B	B1	C	C1	D	D1	D2	D3
Programming	4	4	4	4	4	4	4	4	4	4
Preservation	5	5	3	4	3	3	0	1	2	3
Architectural Design	5	5	4	4	4	4	4	4	4	4
Urban Design	4	4	3	3	3	3	3	3	3	3
Site Planning	4	4	4	4	4	4	5	5	5	5
Functional Layout	3	3	4	4	4	4	5	5	5	5
Parking/Traffic	4	4	4	4	4	4	4	4	4	4
Security	5	5	5	5	5	5	5	5	5	5
Constructability	4	4	3	3	4	4	3	3	3	3
Schedule/Phasing	5	5	5	5	5	5	4	4	4	4
Cost Per Square Foot	4	4	4	4	5	5	5	5	5	5
Financing	4	5	4	5	4	5	4	4	4	4
Total	51	52	47	49	49	50	46	47	48	49

0=Low, 5-High

The results indicated that there was no single option that clearly came out ahead of the rest of the options. Furthermore, all options were within a rather tight range of approximately 10%. In other words, all options have positive and negative dimensions.

In analyzing the scores, the following observations can be made:

- Options that involve the reuse of the historic buildings have received among the highest scores.
- If options A1, B1, and C1 are not possible to pursue given limitations that relate to the Commonwealth's legal and administrative structure, the highest scores then are for A, C and D3.
- Option A, which received the highest score, involves the preservation of both buildings and the construction of a new structure on the corner of 9<sup>th</sup> and Broad Streets.

The results should not be surprising. Placing these results in perspective one can make the following conclusions:

- A balanced view needs to be pursued, one that takes all of the parameters into consideration.
- The study found that there are no compelling reasons for demolishing the buildings. On the contrary, there may be some important benefits that can be derived from their retention, preservation and reuse.
- The highest scoring options, contained preservation dimensions, all important expressions of our culture today that focuses on the preservation and continuing use of historic buildings rather than replacement and demolition.
- The results are also consistent with the Commonwealth's latest initiatives of preserving and reusing important historic buildings, such as the Old State Library, the Finance Building and the Washington Building, all framing the historic Capitol currently under restoration also.

# 11. RECOMMENDATIONS FOR SELECTION AND IMPLEMENTATION

The discovery process undertaken in the preparation of this Plan revealed the following:

1. The 8<sup>th</sup> – 9<sup>th</sup> street site is one of the most important sites in the City of Richmond. As such it requires a sensible and sensitive planning and design option, one that achieves a delicate balance among all competing forces.
2. While the Commonwealth is exempted from zoning regulations, maximizing the size and the density of the development is not a prudent and sensible course of action.
3. While there may be several options, there is no such thing as a “do-nothing” option. The Commonwealth is in need of making key decisions and proceeding with a prudent plan, without further delays. There are several reasons that require immediate action:
  - The infrastructure of the existing buildings has reached and exceeded the end of their useful lives. A “do-nothing” option would place the Commonwealth at risk of facing systems failures with associated disruptions of operations placing the continuity of the business of government in jeopardy.
  - The deferred maintenance of the existing buildings has accumulated serious deterioration problems that can create unnecessary risks for the Commonwealth. While the deterioration is serious, it can be addressed through a carefully structured renovation program. It is indeed imperative that the buildings should be stabilized to ensure that known risks have been addressed, in advance of a renovation plan.
4. The two buildings are historically, architecturally and culturally significant. They are handsome and very good examples of the architecture of their time. They are part of a historic and architectural continuum that has a 200-year history, one that is important to protect and preserve. In the last thirty years, our culture has realized the benefits and significance of preserving and reusing such structures that are indeed historic landmarks, a practice that has benefited and revitalized important parts of Richmond and all of our cities. Both structures can be reused with known costs and benefits.
5. The 9<sup>th</sup> Street Office Building, specifically, is an important part of the Capitol Square, having been a part of the visual framework and “backdrop” of the Capitol. It is significant architecturally, culturally and historically with a history of almost a century.
6. The 8<sup>th</sup> / 9<sup>th</sup> Street site is strategically significant for the Capitol Complex both short term and long term. The site defines the edge of the Capitol Campus: is an anchor of Darden Garden, the East / West axis of the campus: can provide critical space for the needs of the General Assembly and can provide important security benefits for the entire campus.



7. The 9<sup>th</sup> and Broad Street corner is possibly one of the most important intersections of Richmond. A new building on that site would require a thorough urban design, historic architecture and design analysis, an analysis that would create the foundation for a timeless new building to be developed.
8. While there is no single option that clearly stands out among the different scenarios considered in this plan and / or previous studies, one thing is clear, the best selected option is one that would achieve the delicate balance among the Commonwealth's needs, the preservation of historic resources, the strategic needs of the campus, the relationship to the City of Richmond and the tradition of Virginia, as it has been expressed for over 200 years in this Capitol Complex.
9. The recent initiatives of the Commonwealth with the restoration of the Capitol and the renovation of the Old State Library, the Finance Building and the Washington Building have created a framework that needs to be considered seriously as part of the decision making process.
10. A balanced approach of preservation and new construction, expressed through preservation and design excellence, is the best option as this study has presented.

